

We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

186,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



References

- [1] Wells LS, Clarke WF, McMurdie HF. Study of the system $\text{CaO-Al}_2\text{O}_3\text{-H}_2\text{O}$ at temperatures of 21° and 90° C. *Journal of Research of the National Bureau of Standards* 1943; 30 367-409.
- [2] Zhang R, Zheng Sh, Ma Sh, Zhang Y. Recovery of alumina and alkali in Bayer red mud by the formation of andradite-grossular hydrogarnet in hydrothermal process. *Journal of Hazardous Materials* 2011;189(3) 827-835.
- [3] Massazza F. Pozzolanic cements. *Cement and Concrete Composites* 1993;15(4) 185-214.
- [4] Carlson ET. A study fo some strontium aluminates and calcium-strontium aluminate solid solutions. *Journal of Research of the National Bureau of Standards* 1955;54 329-334.
- [5] Flint EP, McMurdie HF, Wells LS. Hydrothermal and X-ray studies of the garnet-hydrogarnet series and the relationship of the series to hydration products of Portland cement. *Journal of Research of the National Bureau of Standards* 1941;26 13-33.
- [6] Carlson ET. Hydrogarnet Formation in the System Lime-Alumina -Silica -Water. *Journal of Research of the National Bureau of Standards* 1956; 56: 327-335.
- [7] Taylor HFW. *Cement chemistry*, 2nd edition. Thomas Telford Publishing: London; 1997. ISBN: 0-7277-2592-0.
- [8] Prodjosantoso AK, Kennedy BJ, Hunter BA. Phase separation induced by hydration of the mixed Ca/Sr aluminates $\text{Ca}_{3-x}\text{Sr}_x\text{Al}_2\text{O}_6$: A crystallographic study. *Cement and Concrete Research* 2002; 32(4) 647-655.
- [9] Brandenberger E. Crystal structure studies on the calcium aluminates. *Schweizer Mineralogische und Petrographische Mitteilungen* 1933;13 569-570.
- [10] Maekawa G. *Journal of the Society of Chemical Industry, Japan* 1943;45 751.
- [11] Douy A, Capron M. Crystallization of spray-dried amorphous precursors in the $\text{SrO-Al}_2\text{O}_3$ system: a DSC study. *Journal of the European Ceramics Society* 2003;23(12) 2075-2081.
- [12] Odler I. *Special inorganic cements*. 1st ed. London: E & FN. Spon; 2000. ISBN: 0-419-22790-3.

- [13] Illyoukha N, Timofeeva V. Development of hydraulic zirconia cements and their applications for production of refractories items. Communication from the Academic Ceramic Centre, The Technical University, Kharkov, Ukraine, Personal Communication, 1998.
- [14] Chatterjee AK. Re-examining the prospects of aluminous cements based on alkali-earth and rare-earth oxides. *Cement and Concrete Research* 2009;39(11) 981-988.
- [15] Rezaie MR, Rezaie HR, Naghizadeh R. The effect of SiO₂ additions on barium aluminate cement formation and properties. *Ceramics International* 2009;35(6) 2235-2240.
- [16] Mohapatra M, Pattanaik DM, Anand S, Das RP. Effect of barium to aluminium ratio on phases leading to barium aluminates. *Ceramics International* 2007;33(4) 531-535.
- [17] Brito HF, Felinto MCFC, Hölsä J, Laamanen T, Lastusaari M, Malkamäki M, Novák P, Rodrigues LCV, Stefani R. DFT and synchrotron radiation study of Eu²⁺ doped BaAl₂O₄. *Optical Materials Express* 2012;2(4) 420-431.
- [18] Franco M. System SrO-Al₂O₃, pp. 118; in *Phase diagram for ceramics, Part 1*, Edited by Levine EM, Robbins CR, McMurdie HF. The American Ceramic Society; Ohio; 1959.
- [19] Ropp RC. *Encyclopedia of the Alkaline Earth Compounds*. Amsterdam: Elsevier; 2013. ISBN: 978-0-444-59550-8.
- [20] Obukuro Y, Matsushima Sh, Nakamura H, Arai M, Yamada H, Xu Ch.-N. Electronic structure of Eu²⁺-doped SrAl₂O₄ using modified Becke-Johnson exchange potential. *Solid State Communications* 2014;186 46-49.
- [21] Stanciu ML, Ciresan MG, Avram NM. Crystal Field Analysis of Cr³⁺ doped SrAl₂O₄ spinel. *Acta physica polonica A* 2009;116(4) 544-546.
- [22] Liu B, Barbier J. Structures of the stuffed tridymite derivatives, BaMSiO₄ (M = Co, Zn, Mg). *Journal of Solid State Chemistry* 1993;102(1) 115-125.
- [23] Madhavi S, Ferraris C, White T. Synthesis and characterization of three-dimensionally ordered macroporous ternary oxide. *Journal of Solid State Chemistry* 2006;179(3) 866-872.
- [24] Fukuda K, Fukushima K. Crystal structure of hexagonal SrAl₂O₄ at 1073 K. *Journal of Solid State Chemistry* 2005;178 2709-2714.
- [25] Machida K.-I, Adachi G.-Y, Shiokawa J, Shimada M, Koizumi M. Structure of strontium tetraaluminate β -SrAl₄O₇. *Acta Crystallographica Section B* 1982;38(3) 889-891.
- [26] Lindop AJ, Goodwin DW. The refined structure of SrO·2Al₂O₃. *Acta Crystallographica Section B* 1972; 28 2625-2626.
- [27] Harindranath K, Viswanath KA, Chandran CV, Bräuniger T, Madhu PK, Ajithkumar TG, Joy PA. Evidence for the co-existence of distorted tetrahedral and trigonal bipy-

- amidal aluminium sites in $\text{SrAl}_{12}\text{O}_{19}$ from ^{27}Al NMR studies. *Solid State Communications* 2010;150(5-6) 262-266.
- [28] Venkateshwaran B, Yao M, Guo R, Bhalla A, Balachandran U. Low temperature dielectric properties of magnetoplumbite family of materials. *International Journal of Inorganic Materials* 1999;1(3-4) 213-217.
- [29] Xie L, Cormack AN. Defect solid state chemistry of magnetoplumbite structured ceramic oxides: I. $\text{SrAl}_{12}\text{O}_{19}$. *Journal of Solid State Chemistry* 1989;83(2) 282-291.
- [30] Chawla S, Yadav A. Role of valence state of dopant (Eu^{2+} , Eu^{3+}) and growth environment in luminescence and morphology of $\text{SrAl}_{12}\text{O}_{19}$ nano- and microcrystals. *Materials Chemistry and Physics* 2010;122(2-3) 582-587.
- [31] Lindop AJ, Matthews C, Goodwin DW. The refined structure of $\text{SrO} \cdot 6\text{Al}_2\text{O}_3$. *Acta Crystallographica Section B* 1975; 31 2940-2941.
- [32] Verdun HR, Wortman DE, Morrison CA, Bradshaw JL. Optical properties of Nd^{3+} in single crystal $\text{SrAl}_{12}\text{O}_{19}$. *Optical Materials* 1997;7(3) 117-128.
- [33] Iyi N, Göbbels M. Crystal Structure of the New Magnetoplumbite-Related Compound in the System $\text{SrO}-\text{Al}_2\text{O}_3-\text{MgO}$. *Journal of Solid State Chemistry* 1996;122(1) 46-52.
- [34] Li YJ, Ma YY, Ye S, Hu GP, Zhang QY. Site-related near-infrared luminescence in $\text{MAl}_{12}\text{O}_{19}$ ($\text{M} = \text{Ca}, \text{Sr}, \text{Ba}$): Fe^{3+} phosphors. *Materials Research Bulletin* 2014;51 1-5.
- [35] Chen X, Zhang Y, Zhong X, Xu Z, Zhang J, Cheng Y, Zhao Y, Liu Y, Fan X, Wang Y, Ma H, Cao X. Thermal cycling behaviors of the plasma sprayed thermal barrier coatings of hexaluminates with magnetoplumbite structure. *Journal of the European Ceramic Society* 2010;30(7) 1649-1657.
- [36] Obradors X, Labarta A, Isalgué A, Tejada J, Rodriguez J, Pernet M, *Solid State Communications* 1988;65 189-192.
- [37] Ishiwata Sh, Terasaki I, Azuma M, Takano M. High pressure synthesis and structure of a new magnetoplumbite-type cobalt oxide $\text{SrCo}_{12}\text{O}_{19}$. *Journal of Solid State Chemistry* 2008;181(5) 1273-1278.
- [38] Verstegen JMPJ, Stevels ALN. The relation between crystal structure and luminescence in β -alumina and magnetoplumbite phases. *Journal of Luminescence* 1974;9(5) 406-414.
- [39] Wang Ch.-H, Guo D.-F, Li Z.-F, Wang X.-M, Lin J.-H, Zeng Z.-Z, Jing X.-P. Crystal structure of $\text{Sr}_6\text{Y}_2\text{Al}_4\text{O}_{15}$: XRD refinements and first-principle calculations. *Journal of Solid State Chemistry* 2012;192 195-200.
- [40] Kimura K, Ohgaki M, Tanaka K, Morikawa H, Marumo F. Study of the bipyramidal site in magnetoplumbite-like compounds, $\text{SrM}_{12}\text{O}_{19}$ ($\text{M} = \text{Al}, \text{Fe}, \text{Ga}$). *Journal of Solid State Chemistry* 1990;87(1) 186-194.

- [41] Yamaguchi O, Narai A, Shimizu K. New compound in system $\text{SrO-Al}_2\text{O}_3$. Journal of the American Ceramic Society 1986;69(2) C36-C37.
- [42] Kahlenberg V. Synthesis and crystal structure of $\text{Sr}_{10}\text{Al}_6\text{O}_{19}$: a derivative of the perovskite structure type in the system $\text{SrO-Al}_2\text{O}_3$. Materials Research Bulletin 2002;37(4) 715-726.
- [43] Kahlenberg V. The Crystal Structures of the Strontium Gallates $\text{Sr}_{10}\text{Ga}_6\text{O}_{19}$ and $\text{Sr}_3\text{Ga}_2\text{O}_6$. Journal of Solid State Chemistry 2001;160(2) 421-429.
- [44] Nevskii NN, Glasser LD, Iliukhin VV, Belov NV. Determination of the crystal structure of strontium aluminate by means of vector subsystems." Soviet physics, Crystallography (Engl. Transl.) 1979;24(1): 93-95.
- [45] Nadezhina TN, Pobedinskaya EA, Belov NV. Crystal structure of strontium aluminate $\text{Sr}_4\text{Al}_4\text{O}_2[\text{Al}_{10}\text{O}_{23}]$. Soviet physics, Crystallography (Engl. Transl.) 1976;21(4) 471-473.
- [46] Takeda T, Takahashi K, Uheda K, Takizawa H, Endo T. Crystal Structure and Luminescence Properties of $\text{Sr}_2\text{Al}_6\text{O}_{11}:\text{Eu}^{2+}$. Journal of the Japan Society of Powder and Powder Metallurgy 2002;49(12) 1128-1133.
- [47] Gibbs JW. On the equilibrium of heterogeneous substances. Transactions of the Connecticut Academy of Arts and Sciences, Volume III, published by the academy 1874 to 1878.
- [48] Kim G.-H, Sohn I. Effect of Al_2O_3 on the viscosity and structure of calcium silicate-based melts containing Na_2O and CaF_2 . Journal of Non-Crystalline Solids 2012;358(12-13) 1530-1537.
- [49] Park JH, Min DJ. Effect of fluorspar and alumina on the viscous flow of calcium silicate melts containing MgO . Journal of Non-Crystalline Solids 2004;337(2) 150-156.
- [50] Wiedenroth A, Rüssel Ch. The effect of MgO on the thermodynamics of the $\text{Fe}^{2+}/\text{Fe}^{3+}$ -redox equilibrium and the incorporation of iron in soda-magnesia-aluminosilicate melts. Journal of Non-Crystalline Solids 2003;320(1-3) 238-245.
- [51] Benne D, Rüssel Ch, Menzel M, Becker KD. The effect of alumina on the $\text{Sn}^{2+}/\text{Sn}^{4+}$ redox equilibrium and the incorporation of tin in $\text{Na}_2\text{O}/\text{Al}_2\text{O}_3/\text{SiO}_2$ melts. Journal of Non-Crystalline Solids 2004;337(3) 232-240.
- [52] Gerlach S, Claußen O, Rüssel Ch. A voltammetric study on the thermodynamics of the $\text{Fe}^{3+}/\text{Fe}^{2+}$ -equilibrium in alkali-lime-alumosilicate melts. Journal of Non-Crystalline Solids 1999;248(1) 92-98.
- [53] Massazza F, Cannas M. System $\text{CaO-Al}_2\text{O}_3\text{-SrO}$, subsolidus. Annali di Chimica (Rome, Italy) 1959;49(7-8) 1342-1350.
- [54] Massazza F, Sirchia E. Equilibriums at the temperature of fusion in the ternary system $\text{SrO-Al}_2\text{O}_3\text{-CaO}$. Annali di Chimica (Rome, Italy) 1959;49 1352-1370.

- [55] Tarnopol'skaya RA, Gul'ko NV. The CaO-SrO-Al₂O₃-ZrO₂ system and its importance for refractories technology. *Refractories and Industrial Ceramics* 1967;8(11-12) 760-763.
- [56] Pitak YN, Proskurnya EM. On the subsolidus structure in the CaAl₄O₇ – Ca₇Al₆ZrO₁₈ – CaAl₂O₄ – CaZrO₃ – SrZrO₃ – SrAl₂O₄ region of the CaO – SrO – Al₂O₃ – ZrO₂ system. *Refractories and Industrial Ceramics* 2000;41(9-10) 360-363.
- [57] Kellogg HH, in: *Applications of Fundamental Thermodynamics to Metallurgical Processes*, G.R. Fitterer (Ed.), Gordon and Breach, London; 1967, p. 357.
- [58] Latimer WM. Methods of estimating the entropies of solid compounds. *Journal of the American Chemical Society* 1951;73(4) 1480-1482.
- [59] Spencer PJ. Estimation of thermodynamic data for metallurgical applications. *Thermochimica Acta* 1998;314(1-2) 1-21.
- [60] Aronson S. Estimation of the heat of formation of refractory mixed oxides. *Journal of Nuclear Materials* 1982;107 343-346.
- [61] Voňka P, Leitner J. A method for the estimation of the enthalpy of formation of mixed oxides in Al₂O₃-Ln₂O₃ systems. *Journal of Solid State Chemistry* 2009;182(4) 744-748.
- [62] Zhuang W, Liang J, Qiao Z, Shen J, Shi Y, Rao G. Estimation of the standard enthalpy of formation of double oxide. *Journal of Alloys and Compounds* 1998;267(1-2) 6-10.
- [63] Moiseev G, Leitner J, Šesták J, Zhukovsky V. Empirical dependences of the standard enthalpy of formation for related inorganic compounds enhancing glass formers. *Thermochimica Acta* 1996;280-281 511-521.
- [64] Šesták J, Moiseev GK, Tzagareishvili DS. Oxide-phase simulated thermodynamics and calculation of thermochemical properties of compounds auxiliary to Y-Ba-Cu-O high T_c superconductors. *Japanese Journal of Applied Physics* 1994;33 97-102.
- [65] Le Van M, *Bulletin de la Société Chimique de France* 1972;2 579.
- [66] Balonis M, Glasser FP. The density of cement phases. *Cement and Concrete Research* 2009;39(9) 733-739.
- [67] Xu Y, Lu P, Huang G, Zeng Ch. Synthesis of SrAl₄O₇ via citric acid precursor. *Materials Chemistry and Physics* 2006;95(1) 62-66.
- [68] Boyko ER, Wisnyi LG. The optical properties and structures of CaO·(Al₂O₃)₂ and SrO·(Al₂O₃)₂. *Acta Crystallographica* 1958;11 444-445.
- [69] Moukhina E. Determination of kinetic mechanisms for reactions measured with thermoanalytical instruments. *Journal of Thermal Analysis and Calorimetry* 2012;109(3) 1203-1214.

- [70] Galwey AK. Theory of solid-state thermal decomposition react Scientific stagnation or chemical catastrophe? An alternative approach appraised and advocatedions. *Journal of Thermal Analysis and Calorimetry* 2012;109 1625-1635.
- [71] Koga N, Málek J, Šesták J, Tanaka H. Data treatment in non-isothermal kinetics and diagnostic limits of phenomenological models. *Netsu Sokutei* 1993;20(4) 210-223.
- [72] Tanaka H. Thermal analysis and kinetics of solid state reactions. *Thermochimica Acta* 1995;267(1) 29-44.
- [73] Šesták J. Thermal analysis, Part D: Thermophysical properties of solids, their measurements and theoretical thermal analysis. Amsterdam and New York: Elsevier Science Publishers; 1984. ISBN: 0444996532.
- [74] Xu B, Smith P. Dehydration kinetics of boehmite in the temperature range 723–873 K. *Thermochimica Acta* 2012;531 46-53.
- [75] Ptáček P, Kubátová D, Havlica J, Brandštetr J, Šoukal F, Opravil T. The non-isothermal kinetic analysis of the thermal decomposition of kaolinite by thermogravimetric analysis. *Powder Technology* 2010;204 222-227.
- [76] Coats AW, Redfern JP. Kinetic Parameters from Thermogravimetric Data. *Nature* 1964;201 68-69.
- [77] Flynn JH, Wall LA. General Treatment of the thermogravimetry of polymers. *Journal of research of the National Bureau of Standards, Sect. A*, 1966;70 487-523.
- [78] Kissinger HE. Reaction Kinetics in Differential Thermal Analysis. *Analytical Chemistry* 1957;29(11) 1702-1706.
- [79] Blaine RL, Kissinger HE. Homer Kissinger and the Kissinger equation. *Thermochimica Acta* 2012;540 1-6.
- [80] Friedman HL. Kinetics of thermal degradation of char-forming plastics from thermogravimetry. Application to a phenolic plastic. *Journal of Polymer Science Part C: Polymer Symposia* 1964;6 183-185.
- [81] Starink MJ. The determination of activation energy from linear heating rate experiments: a comparison of the accuracy of isoconversion methods. *Thermochimica Acta* 2003;404 163-176.
- [82] Málek J, Criado JM, F.J Gotor, Šesták J. Some comments about a correct estimation of the kinetic exponent for non-isothermal solid-state processes using Augis and Bennett method. *Thermochimica Acta* 1998;322(1) 77-82.
- [83] Augis JA, Bennett JD. Calculation of Avrami parameters for heterogeneous solid-state reactions using a modification of Kissinger method. *Journal of Thermal Analysis* 13 (1978) 283-292.

- [84] Ray CS, Yang Q, Huang W-H, Day DE. Surface and internal crystallization in glasses as determined by differential thermal analysis. *Journal of the American Ceramic Society* 1996;79(12) 3155-3160.
- [85] Málek J. The applicability of Johnson-Mehl-Avrami model in the thermal analysis of the crystallization kinetics of glasses. *Thermochimica acta* 1995;267 61-73.
- [86] Straszko J, Olszak-Humienik M, Możejko J. Kinetics of thermal decomposition of $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$. *Thermochimica Acta* 1997;292(1-2) 145-150.
- [87] Vlaev L, Nedelchev N, Gyurova K, Zagorcheva M. A comparative study of non-isothermal kinetics of decomposition of calcium oxalate monohydrate. *Journal of Analytical and Applied Pyrolysis* 2008;81253-262.
- [88] Pourmortazavi SM, Kohsari I, Teimouri MB, Hajimirsadeghi SS. Thermal behaviour kinetic study of dihydroglyoxime and dichloroglyoxime. *Materials Letters* 2007;61 4670-4673.
- [89] L'vov BV, Polzik LK, Ugolkov VL. Decomposition kinetics of calcite: a new approach to the old problem. *Thermochimica Acta* 2002;390 5-19.
- [90] L'vov BV. Thermal decomposition of solids and melts—new thermochemical approach to the mechanism, kinetics and methodology. Berlin: Springer; 2007.
- [91] Patnaik P. Handbook of inorganic chemicals; McGraw-Hill Companies, Inc.; 2002. ISBN 0-07-049439-8.
- [92] Garcia-Guinea J, Crespo-Feo E, Correcher V, Cremades A, Rubio J, Tormo L, Townsend PD. Luminescence of Strontianite (SrCO_3) from Strontian (Scotland, UK). *Radiation Measurements* 2009;44(4) 338-343.
- [93] Helz GR, Holland HD. The solubility and geologic occurrence of strontianite. *Geochimica et Cosmochimica Acta* 1965;29(12) 1303-1315.
- [94] Casey WH, Chal L, Navrotsky A, Rock PA. Thermochemistry of mixing strontianite [$\text{SrCO}_3(\text{s})$] and aragonite [$\text{CaCO}_3(\text{s})$] to form $\text{Ca}_x\text{Sr}_{1-x}\text{CO}_3(\text{s})$ solid solutions. *Geochimica et Cosmochimica Acta* 1996;60(6) 933-940.
- [95] Massoni N, Rosen J, Chartier M, Cozzika T. Study of barytocalcite as a conditioning matrix for carbon 14: Comparison of several synthesis routes. *Journal of Nuclear Materials* 2013;441(1-3) 152-158.
- [96] Kulik DA, Vinograd VL, Paulsen N, Winkler B. $(\text{Ca,Sr})\text{CO}_3$ aqueous-solid solution systems: From atomistic simulations to thermodynamic modelling. *Physics and Chemistry of the Earth, Parts A/B/C* 2010;35(6-8) 217-232.
- [97] Alía JM, Díaz de Mera Y, Edwards HGM, Martín PG, Andres SL. FT-Raman and infrared spectroscopic study of aragonite-strontianite ($\text{Ca}_x\text{Sr}_{1-x}\text{CO}_3$) solid solution. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 1997;53(13) 2347-2362.

- [98] Fubini B, Renzo FD, Stone FS. Strontianite-aragonite solid solutions $\text{Sr}_x\text{Ca}_{1-x}\text{CO}_3$: Effect of composition on the orthorhombic-rhombohedral phase transition and the conversion to oxide solid solutions $\text{Sr}_x\text{Ca}_{1-x}\text{O}$. *Journal of Solid State Chemistry* 1988;77(2) 281-292.
- [99] Fubini B, Renzo FD, Stone FS. Investigation of the thermal stability of CaCO_3 - SrCO_3 solid solutions. *Thermochimica Acta* 1987;122(1) 23-28.
- [100] Ruiz-Hernandez SE, Grau-Crespo R, Ruiz-Salvador AR, De Leeuw NH. Thermochemistry of strontium incorporation in aragonite from atomistic simulations. *Geochimica et Cosmochimica Acta* 2010;74(4) 1320-1328.
- [101] Rushdi AI, McManus J, Collier RW. Marine barite and celestite saturation in seawater. *Marine Chemistry* 2000;69 19-31.
- [102] Utigard T, Toguri JM, See Through The Hall-Heroult Cell During Electrolysis. *Proceedings of the International Symposium on Quality and Process Control in the Reduction and Casting of Aluminum and Other Light Metals*. Canada, Winnipeg: August 23-26; 1987, p.37-49.
- [103] Tabereaux AT, Peterson RD. Aluminum Production. *Treatise on Process Metallurgy*. In: *Industrial Processes*; ed: Seetharaman S, p.839-917; 2014. ISBN: 978-0-08-096988-6.
- [104] Chapman V, Welch BJ, Skyllas-Kazacos M. Anodic behaviour of oxidised Ni-Fe alloys in cryolite-alumina melts. *Electrochimica Acta* 2011;56(3) 1227-1238.
- [105] Haupin W. Aluminum. In: *Encyclopedia of Physical Science and Technology* (Third Edition), p.495-518; 2003.
- [106] Amigó JM, Serrano FJ, Kojdecki MA, Bastida J, Esteve V, Reventós MM, Martí F. X-ray diffraction microstructure analysis of mullite, quartz and corundum in porcelain insulators. *Journal of the European Ceramic Society* 2005;25(9) 1479-1486.
- [107] Leriche A, Moortgat G, Cambier F, Homerin P, Thevenot F, Orange G, Fantozzi G. Preparation and characterization of a dispersion toughened ceramic for thermomechanical uses (ZTA). Part I: Material preparation. Characterization of microstructure. *Journal of the European Ceramic Society* 1992;9(3) 169-176.
- [108] Piconi C, Condo SG, Kosmač T. Alumina- and Zirconia-based Ceramics for Load-bearing Applications. In: *Advanced Ceramics for Dentistry*; ed. Shen J; p219-253; 2014. ISBN: 978-0-12-394619-5.
- [109] Djangang CN, Kamseu E, Ndikontar MK, Nana GLL, Soro J, Melo UC, Elimbi A, Blanchart P, Njopwouo D. Sintering behaviour of porous ceramic kaolin-corundum composites: Phase evolution and densification. *Materials Science and Engineering: A* 2011;528(29-30) 8311-8318.

- [110] Katsavou ID, Krokida MK, Ziomas IC. Determination of mechanical properties and thermal treatment behavior of alumina-based refractories. *Ceramics International* 2012;38(7) 5747-5756.
- [111] Gogtas C, Lopez HF, Sobolev K. Role of cement content on the properties of self-flowing Al_2O_3 refractory castables. *Journal of the European Ceramic Society* 2014;34(5) 1365-1373.
- [112] Marinescu ID, Rowe WB, Dimitrov B, Ohmori H. *Abrasives and abrasive tools Tribology of Abrasive Machining Processes* (Second Edition). Imprint: William Andrew; p.243-311; 2013. ISBN: 978-1-4377-3467-6.
- [113] Mata-Osoro G, Moya JS, Pecharroman C. Transparent alumina by vacuum sintering. *Journal of the European Ceramic Society* 2012;32(11) 2925-2933.
- [114] Sarkar R, Ghosh A, Das SK. Reaction sintered magnesia rich magnesium aluminate spinel: effect of alumina reactivity. *Ceramics International* 2003;29(4) 407-411.
- [115] Klatt M, Bellmann D, Kampmann R, Wagner R, Wolf C, Hübner H. Analysis of creep pore formation in liquid-phase sintered alumina. *Materials Science and Engineering: A* 1997;234–236 932-935.
- [116] Goswami AP, Roy S, Das GC. Effect of powder, chemistry and morphology on the dielectric properties of liquid-phase-sintered alumina. *Ceramics International* 2002;28(4) 439-445.
- [117] Goswami AP, Roy S, Mitra MK, Das GC. Influence of powder, chemistry and intergranular phases on the wear resistance of liquid-phase-sintered Al_2O_3 . *Wear* 2000;244(1–2) 1-14.
- [118] Mohammad-Rahimi R, Rezaie HR, Nemati A. Sintering of Al_2O_3 -SiC composite from sol-gel method with MgO, TiO_2 and Y_2O_3 addition. *Ceramics International* 2011;37(5) 1681-1688.
- [119] Sktani ZDI, Azhar AZA, Ratnam MM, Ahmad ZA. The influence of in-situ formation of hibonite on the properties of zirconia toughened alumina (ZTA) composites. *Ceramics International* 2014;40(4) 6211-6217.
- [120] Vasudevan R, Karthik T, Ganesan S, Jayavel R. Effect of microwave sintering on the structural and densification behavior of sol-gel derived zirconia toughened alumina (ZTA) nanocomposites. *Ceramics International* 2013;39(3) 3195-3204.
- [121] Tomaszewski H, Boniecki M, Weglarz H. Toughness-curve behaviour of alumina-SiC and ZTA-SiC composites. *Journal of the European Ceramic Society* 2000;20(8) 1215-1224.
- [122] Si T, Lou N, Zhang Q, You X. Thermal shock fatigue behavior of $\text{TiC}/\text{Al}_2\text{O}_3$ composite ceramics. *Rare Metals* 2008;27(3) 308-314.

- [123] Laarz E, Carlsson M, Vivien B, Johnsson M, Nygren M, Bergström L. Colloidal processing of Al_2O_3 -based composites reinforced with TiN and TiC particulates, whiskers and nanoparticles. *Journal of the European Ceramic Society* 2001;21(8) 1027-1035.
- [124] Nassau K. Dr. A. V. L. Verneuil: The man and the method. *Journal of Crystal Growth* 1972;13-14 12-18.
- [125] Ueltzen M. The Verneuil flame fusion process: substances. *Journal of Crystal Growth* 1993;132(1-2) 315-328.
- [126] Arivuoli D. Principles of the Verneuil Growth Technique. *Encyclopedia of Materials: Science and Technology* (Second Edition); p.7854-7856; 2001. ISBN: 978-0-08-043152-9.
- [127] R.R. Neurgaonkar. Single Crystal Processes. *Encyclopedia of Materials: Science and Technology* (Second Edition); p.8629-8635; 2001. ISBN: 978-0-08-043152-9.
- [128] Tchamba AB, Melo UC, Lecomte-Nana GL, Kamseu E, Gault C, Yongue R, Njopwouo D. Use of bauxite from Cameroon for solid state sintering and characterization of calcium dialuminate ($\text{CaO} \cdot 2\text{Al}_2\text{O}_3$) refractory cement. *Ceramics International* 2014;40(1) 1961-1970.
- [129] Caballero A, Valle F., De Aza S, Castillo S. Constitution of calcined refractory-grade bauxites: An interpretation. *Ceramics International* 1985;11(2) 45-50.
- [130] Caballero A, Requena J, De Aza S. Refractory bauxites. How processing can improve high temperature mechanical properties. *Ceramics International* 1986;12(3) 155-160.
- [131] Abou-Sekkina MM, Abo-El-Enein SA, Khalil NM, Shalma OA. Phase composition of bauxite-based refractory castables. *Ceramics International* 2011;37(1) 411-418.
- [132] Maciejewski M, Richarz W. Reduction of iron oxides in bauxite by hydrogen. *Thermochimica Acta* 1985;85 199-202.
- [133] Milne DJ, Wibberley LJ. The removal of iron from bauxite using anhydrous hydrogen chloride. *Light Metals* 1977;2 125-145.
- [134] Hussain SA, Jamal R. Evaluation of an HCl process for leaching of low-grade highly siliceous bauxite ore. *Developments in Mineral Processing* 2000;13 C6-8-C6-14.
- [135] Zhao A.-ch, Liu Y, Zhang T.-a, Lü G.-z, Dou Z.-h. Thermodynamics study on leaching process of gibbsitic bauxite by hydrochloric acid. *Transactions of Nonferrous Metals Society of China* 2013;23(1) 266-270.
- [136] Reddy BR, Mishra SK, Banerjee GN. Kinetics of leaching of a gibbsitic bauxite with hydrochloric acid. *Hydrometallurgy* 1999;51(1) 131-138.
- [137] Zafar ZI. Determination of semi empirical kinetic model for dissolution of bauxite ore with sulfuric acid: Parametric cumulative effect on the Arrhenius parameters. *Chemical Engineering Journal* 2008;141(1-3) 233-241.

- [138] Papassiopi N, Vaxevanidou K, Paspaliaris I. Effectiveness of iron reducing bacteria for the removal of iron from bauxite ores. *Minerals Engineering* 2010;23(1) 25-31.
- [139] Vasan SS, Modak JM, Natarajan KA. Some recent advances in the bioprocessing of bauxite. *International Journal of Mineral Processing* 2001;62(1-4) 173-186.
- [140] Yeh ChH, Zhang G. Stepwise carbothermal reduction of bauxite ores. *International Journal of Mineral Processing* 2013;124 1-7.
- [141] Yu Ch, Yuan W, Deng Ch, Zhu H, Li J. Synthesis of hexagonal plate-like Al_4SiC_4 from calcined bauxite, silica and carbon black. *Powder Technology* 2013;247 76-80.
- [142] Pontikes Y, Angelopoulos GN. Bauxite residue in cement and cementitious applications: Current status and a possible way forward. *Resources, Conservation and Recycling* 2013;73 53-63.
- [143] Bayer KJ. Verfahren zur darstellung von thonerhydrat und alkalialuminat; 1892.
- [144] Klauber C, Gräfe M, Power G. Bauxite residue issues: II. Options for residue utilization. *Hydrometallurgy* 2011;108(1-2) 11-32.
- [145] Gräfe M, Power G, Klauber C. Bauxite residue issues: III. Alkalinity and associated chemistry. *Hydrometallurgy* 2011;108(1-2) 60-79.
- [146] Piga L, Pochetti F, Stoppa L. Recovering metals from red mud generated during alumina production. *JOM Journal of the Minerals, Metals and Materials Society* 1993;45(11) 54-59.
- [147] Valeton I. Bauxites. Amsterdam: Elsevier Publishing Company; p.226; 1972.
- [148] Hao X, Leung K, Wang R, Sun W, Li Y. The geomicrobiology of bauxite deposits. *Geoscience Frontiers* 2010;1(1) 81-89.
- [149] Smith P. The processing of high silica bauxites - Review of existing and potential processes. *Hydrometallurgy* 2009;98(1-2) 162-176.
- [150] Bárdossy G. Classification of Bauxite Deposits; p.16-22. In: *Developments in Economic Geology; Volume 14: Karst Bauxites Bauxite Deposits on Carbonate Rocks*; 1882. ISBN: 978-0-444-99727-2.
- [151] Gu J, Huang Z, Fan H, Jin Z, Yan Z, Zhang J. Mineralogy, geochemistry, and genesis of lateritic bauxite deposits in the Wuchuan–Zheng'an–Daozhen area, Northern Guizhou Province, China. *Journal of Geochemical Exploration* 2013;130 44-59.
- [152] Bogatyrev BA, Zhukov VV, Tsekhovsky YG. Formation conditions and regularities of the distribution of large and superlarge bauxite deposits. *Lithology and Mineral Resources* 2009;44 135-151.
- [153] Selim AQ, El-Midany AA, Abdel-Fattah AS, Ibrahim SS. Rationalization of the upgrading circuit of celestite for advanced applications. *Powder Technology* 2010;198(2) 233-239.

- [154] El-Midany AA, Ibrahim SS. Does calcite content affect its separation from celestite by Falcon concentrator? *Powder Technology* 2011;213(1-3) 41-47.
- [155] López-Valdivieso A, Robledo-Cabrera A, Uribe-Salas A. Flotation of celestite with the anionic collector sodium dodecyl sulfate. Effect of carbonate ions. *International Journal of Mineral Processing* 2000;60(2) 79-90.
- [156] Hernáinz F, Calero M. The effect of the degree of grinding on the flotation of celestite ore. *Advanced Powder Technology* 2001;12(4) 481-491.
- [157] Şener S, Bilgen S, Özbayoğlu G. Effect of heat treatment on grindabilities of celestite and gypsum and separation of heated mixture by differential grinding. *Minerals Engineering* 2004;17 473-475.
- [158] Ozkan A, Ucbeyiay H, Aydoğan S. Shear flocculation of celestite with anionic surfactants and effects of some inorganic dispersants. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2006;281(1-3) 92-98.
- [159] Ozkan A, Yekeler M. Shear flocculation of celestite with sodium oleate and tallow amine acetate: effects of cations. *Journal of Colloid and Interface Science* 2004;273(1) 170-174.
- [160] Ozkan A, Yekeler M. Coagulation and flocculation characteristics of celestite with different inorganic salts and polymers. *Chemical Engineering and Processing: Process Intensification* 2004;43(7) 873-879.
- [161] Laskowski JS. In: *Colloid Chemistry in Mineral Processing*; ed.: Laskowski JS, Ralston J., New York: Elsevier; 1992.
- [162] Torres J, Mendez J, Sukiennik M. Transformation enthalpy of the alkali-earths sulfates (SrSO_4 , CaSO_4 , MgSO_4 , BaSO_4). *Thermochimica Acta* 1999;334(1-2) 57-66.
- [163] Erdemoğlu M. Carbothermic reduction of mechanically activated celestite. *International Journal of Mineral Processing* 2009;92(3-4) 144-152.
- [164] Owusu G, Litz JE. Water leaching of SrS and precipitation of SrCO_3 using carbon dioxide as the precipitating agent. *Hydrometallurgy* 2000;57(1) 23-29.
- [165] Erdemoğlu M, Canbazoğlu M. The leaching of SrS with water and the precipitation of SrCO_3 from leach solution by different carbonating agents. *Hydrometallurgy* 1998;49(1-2) 135-150.
- [166] Bingöl D, Aydoğan S, Bozbaş SK. Production of SrCO_3 and $(\text{NH}_4)_2\text{SO}_4$ by the dry mechanochemical processing of celestite. *Journal of Industrial and Engineering Chemistry* 2012;18(2) 834-838.
- [167] Zeppenfeld K. Crystallization kinetics of strontianite from $\text{Sr}(\text{HCO}_3)_2$ solutions. *Chemie der Erde – Geochemistry* 2006;66(4) 319-323.

- [168] Setoudeh N, Welham NJ, Azami SM. Dry mechanochemical conversion of SrSO_4 to SrCO_3 . *Journal of Alloys and Compounds* 2010;492(1-2) 389-391.
- [169] Setoudeh N; Welham NJ. Ball milling induced reduction of SrSO_4 by Al. *International Journal of Mineral Processing* 2011;98(3-4) 214-218.
- [170] Bingöl D, Aydoğan S, Gultekin SS. Neural model for the leaching of celestite in sodium carbonate solution. *Chemical Engineering Journal* 2010;165(2) 617-624.
- [171] Kocakusak S, Tolun R, Dogan H, Akcay K, Koroglu HJ, Yuzer H, Koral M, Isbilir F, Savascı OT, Ayok T. Patent No: TR2001/0326521.5; 2003.
- [172] De Buda F. US Patent 4,666,688; 1987.
- [173] Cheng Z, Jiang T. Production of strontium carbonate by ammonium bicarbonate method without removing barium. *Huadong Huagong Xueyuan Xueba* 1992;18 723-728.
- [174] Di H, Wang Y, Zhang Y. Chine HC Patent 1.078.706; 1993.
- [175] Liao F, Zhao L, Zhai Ch, Zhang Z, Ma X. Morphology and photoluminescence properties of SrCO_3 prepared by a simple solution method. *Materials Letters* 2014;122 331-333.
- [176] Xue Y, Ren X, Zhai X, Yu M. Polyvinylpyrrolidone (PVP)-assisted solvothermal synthesis of flower-like $\text{SrCO}_3\text{:Tb}^{3+}$ phosphors. *Materials Research Bulletin* 2012;47(2) 393-399.
- [177] Shi L, Du F. Solvothermal synthesis of SrCO_3 hexahedral ellipsoids. *Materials Letters* 2007;61(14-15) 3262-3264.
- [178] Shi L, Du F. Solvothermal synthesis of fusiform hexagonal prism SrCO_3 microrods via ethylene glycol solution. *Materials Research Bulletin* 2007;42(8) 1550-1555.
- [179] Yang J, Liu X, Li Ch, Quan Z, Kong D, Lin J. Hydrothermal synthesis of $\text{SrCO}_3\text{:Eu}^{3+}/\text{Tb}^{3+}$ microneedles and their luminescence properties. *Journal of Crystal Growth* 2007;303(2) 480-486.
- [180] Li Sh, Zhang H, Xu J, Yang D. Hydrothermal synthesis of flower-like SrCO_3 nanostructures. *Materials Letters* 2005;59(4) 420-422.
- [181] Zhu W, Liang Z, Liu X, Zhang H, Zheng Y, Piao X, Zhang Q. Soft-template self-assembly of hierarchical mesoporous SrCO_3 by low-temperature hydrothermal route and their application as adsorbents for methylene blue and heavy metal ions. *Powder Technology* 2012;226 165-172.
- [182] Ni Sh, Yang X, Li T. Hydrothermal synthesis and photoluminescence properties of SrCO_3 . *Materials Letters* 2011;65(4) 766-768.
- [183] Alavi MA, Morsali A. Syntheses and characterization of $\text{Sr}(\text{OH})_2$ and SrCO_3 nanostructures by ultrasonic method. *Ultrasonics Sonochemistry* 2010;17(1) 132-138.

- [184] Thongtem T, Tipcompor N, Phuruangrat A, Thongtem S. Characterization of SrCO_3 and BaCO_3 nanoparticles synthesized by sonochemical method. *Materials Letters* 2010;64(4) 510-512.
- [185] Ma M.-G., Zhu Y.-J. Microwave synthesis of SrCO_3 one-dimensional nanostructures assembled from nanocrystals using ethylenediamine additive. *Materials Letters* 2008;62(16) 2512-2515.
- [186] Tipcompor N, Thongtem T, Phuruangrat A, Thongtem S. Characterization of SrCO_3 and BaCO_3 nanoparticles synthesized by cyclic microwave radiation. *Materials Letters* 2012;87 153-156.
- [187] Obut A, Baláž P, Girgin İ. Direct mechanochemical conversion of celestite to SrCO_3 . *Minerals Engineering* 2006;19(11) 1185-1190.
- [188] Li L, Lin R, Tong Z, Feng Q. Crystallization control of SrCO_3 nanostructure in imidazolium-based temperature ionic liquids. *Materials Research Bulletin* 2012;47(11) 3100-3106.
- [189] Hind AR, Bhargava SK, Grocott SC. The surface chemistry of Bayer process solids: a review. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 1999;146(1-3) 359-374.
- [190] Power G, Loh JSC, Vernon Ch. Organic compounds in the processing of lateritic bauxites to alumina Part 2: Effects of organics in the Bayer process. *Hydrometallurgy* 2012;127-128 125-149.
- [191] Whittington BI, Fallows TM, Willing MJ. Tricalcium aluminate hexahydrate (TCA) filter aid in the Bayer industry: factors affecting TCA preparation and morphology. *International Journal of Mineral Processing* 1997;49(1-2) 1-29.
- [192] Whittington BI, Cardile CM. The chemistry of tricalcium aluminate hexahydrate relating to the Bayer industry. *International Journal of Mineral Processing* 1996;48(1-2) 21-38.
- [193] Zhang B, Li J, Chen Q, Chen G. Precipitation of $\text{Al}(\text{OH})_3$ crystals from supersaturated sodium aluminate solution irradiated with ultrasonic sound. *Minerals Engineering* 2009;22(9-10) 853-858.
- [194] Zhang Y, Zheng Sh, Du H, Xu H, Wang Sh, Zhang Y. Improved precipitation of gibbsite from sodium aluminate solution by adding methanol. *Hydrometallurgy* 2009;98(1-2) 38-44.
- [195] Zeng J, Yin Z, Chen Q. Intensification of precipitation of gibbsite from seeded caustic sodium aluminate liquor by seed activation and addition of crown ether. *Hydrometallurgy* 2007;89(1-2) 107-116.

- [196] Smith PG, Watling HR, Crew P. The effects of model organic compounds on gibbsite crystallization from alkaline aluminate solutions: polyols. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 1996;111(1-2) 119-130.
- [197] Yin Z, Zeng J, Chen Q. Effect of oleic acid on gibbsite precipitation from seeded sodium aluminate liquors. *International Journal of Mineral Processing* 2009;92(3-4) 184-189.
- [198] Watling H. Gibbsite crystallization inhibition: 2. Comparative effects of selected alditols and hydroxycarboxylic acids. *Hydrometallurgy* 2000;55(3) 289-309.
- [199] Samal S, Ray AK, Bandopadhyay A. Proposal for resources, utilization and processes of red mud in India - A review. *International Journal of Mineral Processing* 2013;118 43-55.
- [200] Liu W, Yang J, Xiao B. Application of Bayer red mud for iron recovery and building material production from aluminosilicate residues. *Journal of Hazardous Materials* 2009;161(1) 474-478.
- [201] Abhilash, Sinha Sh, Sinha MK, Pandey BD. Extraction of lanthanum and cerium from Indian red mud. *International Journal of Mineral Processing* 2014;12770-73.
- [202] Couillard D. Use of red mud, a residue of alumina production by the Bayer process, in water treatment. *Science of the Total Environment* 1982;25(2) 181-191.
- [203] He H, Yue Q, Qi Y, Gao B, Zhao Y, Yu H, Li J, Li Q, Wang Y. The effect of incorporation of red mud on the properties of clay ceramic bodies. *Applied Clay Science* 2012;70 67-73.
- [204] Kumar A, Kumar S. Development of paving blocks from synergistic use of red mud and fly ash using geopolymerization. *Construction and Building Materials* 2013;38 865-871.
- [205] Nishida T, Nakano H, Urabe K. Preparation and characterization of polycrystalline alumina with small grain size. *Journal of the European Ceramic Society* 1993;12(3) 197-203.
- [206] Gu H, Tian P, Li Y, Hao X. Low-temperature electrolytic coloration and spectral property of ammonium alum crystals. *Journal of Luminescence* 2012;132(7) 1623-1626.
- [207] Park HC, Park YJ, Stevens R. Synthesis of alumina from high purity alum derived from coal fly ash. *Materials Science and Engineering: A* 2004;367(1-2) 166-170.
- [208] Lim AR, Moon H.-G, Chang J.-H. Nuclear magnetic resonance study of the phase transitions and local environments of α -alum $\text{NH}_4\text{Al}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ single crystals. *Chemical Physics* 2010;371(1-3) 91-95.

- [209] Petruševski VM, Ivanovski V, Šoptrajanov B, Zugik M. Vibrational spectra of hexaaqua complexes. X. Raman and IR studies of the sulfate group disorder in α -alums. *Journal of Molecular Structure* 2001;563-564 329-333.
- [210] Wang LK, Yang JY. Total waste recycle system for water purification plant using alum as primary coagulant. *Resource Recovery and Conservation* 1975;1(1) 67-84.
- [211] Gao S, Wang Ch, Pei Y. Comparison of different phosphate species adsorption by ferric and alum water treatment residuals. *Journal of Environmental Sciences*, Volume 25, Issue 5, 1 May 2013, Pages 986-992.
- [212] Korchak YM, Kapustyanyk VB, Partyka MV, Rudyk VP. Temperature variation of the optical absorption edge for ammonium aluminum alum. *Journal of Applied Spectroscopy* 2007;74(2) 289-294.
- [213] Lazarev VV, Blinov LM, Palto SP, Yudin SG. Electro-optical and ferroelectric switching of Langmuir-Blodgett films made of a chiral smectic-C*liquid crystalline compound. *Thin Solid Films* 2008;516(24) 8905-8908.
- [214] Jotshi CK. Thermal storage in ammonium alum/ammonium nitrate eutectic for solar space heating applications. *Solar Energy Engineering* 1998;120 20-24.
- [215] Rathod MK, Banerjee J. Thermal stability of phase change materials used in latent heat energy storage systems: A review. *Renewable and Sustainable Energy Reviews* 2013;18 246-258.
- [216] Aderemi BO, Hameed BH. Alum as a heterogeneous catalyst for the transesterification of palm oil. *Applied Catalysis A: General* 2009;370(1-2) 54-58.
- [217] Sonar SS, Shelke KF, Kakade GK, Shingate BB, Shingare MS. Alum: An efficient catalyst for one-pot synthesis of α -aminophosphonates. *Chinese Chemical Letters* 2009;20(9) 1042-1046.
- [218] Jandová J, Dvořák P, Formánek J, Vu HN. Recovery of rubidium and potassium alums from lithium-bearing minerals. *Hydrometallurgy* 2012;119-120 73-76.
- [219] Wojciechowska R, Wojciechowski W, Kamiński J. Thermal decompositions of ammonium and potassium alums. *Journal of thermal analysis* 1988;33(2) 503-509.
- [220] Toniolo JC, Lima MD, Takimi AS, Bergmann CP. Synthesis of alumina powders by the glycine-nitrate combustion process. *Materials Research Bulletin* 2005;40(3) 561-571.
- [221] Su X, Chen Sh, Zhou Z. Synthesis and characterization of monodisperse porous α - Al_2O_3 nanoparticles. *Applied Surface Science* 2012;258(15) 5712-5715.
- [222] Kingsley JJ, Patil KC. A novel combustion process for the synthesis of fine particle α -alumina and related oxide materials. *Materials Letters* 1988;6(11-12) 427-432.

- [223] Minnermann M, Grossmann HK, Pokhrel S, Thiel K, Hagelin-Weaver H, Bäumer M, Mädler L. Double flame spray pyrolysis as a novel technique to synthesize alumina-supported cobalt Fischer–Tropsch catalysts. *Catalysis Today* 2013;214 90-99.
- [224] Kathirvel P, Chandrasekaran J, Manoharan D, Kumar S. Preparation and characterization of alpha alumina nanoparticles by in-flight oxidation of flame synthesis. *Journal of Alloys and Compounds* 2014;590 341-345.
- [225] Aman Y, Rossignol C, Garnier V, Djurado E. Low temperature synthesis of ultrafine non vermicular α -alumina from aerosol decomposition of aluminum nitrates salts. *Journal of the European Ceramic Society* 2013;33(10) 1917-1928.
- [226] Vallet-Regí M, Rodríguez-Lorenzo LM, Ragel CV, Salinas AJ, González-Calbet JM. Control of structural type and particle size in alumina synthesized by the spray pyrolysis method. *Solid State Ionics* 1997;101-103 197-203.
- [227] Hu Y, Ding H, Li Ch. Preparation of hollow alumina nanospheres via surfactant-assisted flame spray pyrolysis. *Particuology* 2011;9(5) 528-532.
- [228] Sharifi L, Beyhaghi M, Ebadzadeh T, Ghasemi E. Microwave-assisted sol–gel synthesis of alpha alumina nanopowder and study of the rheological behavior. *Ceramics International* 2013;39(2) 1227-1232.
- [229] Cheng L.-T, Tsai M.-Y, Tseng WJ, Hsiang H.-I, Yen F.-S. Boehmite coating on θ - Al_2O_3 particles via a sol–gel route. *Ceramics International* 2008;34(2) 337-343.
- [230] Liu H, Ning G, Gan Z, Lin Y. Emulsion-based synthesis of unaggregated, spherical alpha alumina. *Materials Letters* 2008;62(10-11) 1685-1688.
- [231] Ponthieu E, Payen E, Grimblot J. Ultrafine alumina powders via a sol-emulsion-gel method. *Journal of Non-Crystalline Solids* 1992;147-148 598-605.
- [232] Russell DS, Campbell JH, Bermaban SS. The spectrophotometric determination of strontium with murexide (ammonium purpurate). *Analytica Chimica Acta* 1961;25(1) 81-84.
- [233] Fornaseri M, Grandi L. Flame photometric determination of strontium in silicates. Strontium content of the granite G-1 and the diabase W-1. *Geochimica et Cosmochimica Acta* 1960;19(3) 218-221.
- [234] Andersen NR, Hume DN. Determination of barium and strontium in sea water. *Analytica Chimica Acta* 1968;40 207-220.
- [235] Webb MSW, Wordingham ML. The direct flame photometric determination of Strontium: Calcium ratios in the ash of human bones and teeth. *Analytica Chimica Acta* 1963;28 450-456.
- [236] Arslan Z, Tyson JF. Determination of calcium, magnesium and strontium in soils by flow injection flame atomic absorption spektrometry. *Talanta* 1999;50(5) 929-937.

- [237] Höglund G. Determination of strontium in bone by X-ray fluorescence spectroscopy. *Experimental Cell Research* 1959;17(3) 565-569.
- [238] Macka M, Paull B, Andersson P, Haddad PR. Determination of barium and strontium by capillary zone electrophoresis using an electrolyte containing sulfonazo III. *Journal of Chromatography A* 1997;767(1-2) 303-310.
- [239] Gautier EA, Gettar RT, Servant RE. Simultaneous determination of lanthanum, strontium and copper in superconductor materials by ion chromatography. *Analytica Chimica Acta* 1993;283(1) 350-353.
- [240] Loveridge BA, Webster RK, Morgan JW, Thomas AM, Smales AA. The determination of strontium in rocks and biological materials. *Analytica Chimica Acta* 1960;23 154-171.
- [241] American Society for Testing and Materials (ASTM), *Annual Book of ASTM Standards*, vol. 04.01, C-114, Philadelphia, PA, USA, 2004.
- [242] Vanhoyland G, Bourée F, Van Bael MK, Mullens J, Van Poucke LC. Structure Determination and Refinement of Acid Strontium Oxalate from X-Ray and Neutron Powder Diffraction. *Journal of Solid State Chemistry* 2001;157(2) 283-288.
- [243] Brandenburg K. (Crystal Impact GbR.), &&DIAMOND: Visual Crystal Structure Information System," version 2.1c.
- [244] Idriss KA, Sedaira H, Ahmed SS. Determination of strontium and simultaneous determination of strontium oxide, magnesium oxide and calcium oxide content of Portland cement by derivative ratio spectrophotometry. *Talanta* 2009;78(1) 81-87.
- [245] Knaepen E, Mullens J, Yperman J, Van Poucke LC. Preparation and thermal decomposition of various forms of strontium oxalate. *Thermochimica Acta* 1996;284(1) 213-227.
- [246] Yu J, Tang H, Cheng B. Morphological control of strontium oxalate particles by PSMA-mediated precipitation reaction. *Materials Chemistry and Physics* 2005;91(1) 134-139.
- [247] Grahek Z, Macefat MR. Determination of radioactive strontium in seawater. *Analytica Chimica Acta* 2005;534 271-279.
- [248] Jones P, Foulkes M, Paull B. Determination of barium and strontium in calcium-containing matrices using high-performance chelation ion chromatography. *Journal of Chromatography A* 1994;673(2) 173-179.
- [249] Robinson P. Determination of calcium, magnesium, manganese, strontium, sodium and iron in the carbonate fraction of limestones and dolomites. *Chemical Geology* 1980;28 135-147.

- [250] Patti F, Hernandez JA. Nouvelle methode de separation calcium-strontium appliquee a la preparation d'un sel de calcium de tres faible teneur en strontium. *Analytica Chimica Acta* 1971;55(2) 325-332.
- [251] Sedaira H. Simultaneous determination of manganese and zinc in mixtures using first- and second-derivative spectrophotometry. *Talanta* 2000;51(1) 39-48.
- [252] Agnihotri NK, Ratnani S, Singh VK, Singh HB. Simultaneous determination of gallium and indium with 2-(5-bromo-2-pyridylazo)-5-diethylaminophenol in cationic micellar medium using derivative spectrophotometry. *Analytical Sciences* 2003;9 1297-1301.
- [253] Eskandari H, Saghseloo AG: Second and first-derivative spectrophotometry for efficient simultaneous and individual determination of palladium and cobalt using 1-(2-pyridylazo)-2-naphthol in sodium dodecylsulfate micellar media. *Analytical Sciences* 2003;19(11) 1513-1518.
- [254] Bhalotra A, Puri BK. Simultaneous first derivative spectrophotometric determination of palladium and nickel using 2-(2-Thiazolylazo)-5-dimethylamino-benzoic acid as an analytical reagent. *Microchimica Acta* 2000;134(3-4) 139-143.
- [255] Benamor M, Aguerssif N. Simultaneous determination of calcium and magnesium by derivative spectrophotometry in pharmaceutical products. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 2008;69(2) 676-681.
- [256] O'Haver TC, Fell AF, Smith G, Gans P, Sneddon J, Bezur L, Michel RG, Ottaway JM, Miller JN, Ahmad TA, Fell AF, Chadburn BP, Cottrell CT. Derivative spectroscopy and its applications in analysis. *Analytical Proceedings* 1982;19(1) 22-46.
- [257] Ishii H, Satoh KZ. Determination of micro amounts of samarium and europium by analogue derivative spectrophotometry *Analytical Chemistry* 1982;312(2) 114-120.
- [258] Leviillain P, Fompeydie D. Spectrophotométrie dérivée: intérêt, limites et applications," *Analysis*, *Analysis* 1986;14 1-20.
- [259] O'Haver TC. Derivative Spectroscopy: Theoretical Aspects. *Analytical Proceedings* 1982;19 22-28.
- [260] Medinilla J, Ales F, Sanchez FG, Spectrophotometric and second-derivative spectrophotometric determination of mercury in organomercurials by means of benzyl 2-pyridyl ketone 2-quinolyldiazone. *Talanta* 1986;33(4) 329-334.
- [261] Sanchez FG, Lopez MH, Gomez and JCM. A graphical derivative approach to the photometric determination of lutetium and praseodymium in mixtures. *Talanta* 1987;34(7) 639-644.
- [262] Salinas F, Nevado JJ, Espinosa-Mansilla A. A new spectrophotometric method for quantitative multicomponent analysis resolution of mixtures of salicylic and salicylic acids. *Talanta* 1990;37(3) 347-351.

- [263] Nevado JJB, Cabanillas CG, Salinas F. Spectrophotometric resolution of ternary mixtures of salicylaldehyde, 3-hydroxybenzaldehyde and 4-hydroxybenzaldehyde by the derivative ratio spectrum-zero crossing method. *Talanta* 1992;39(5) 547-533.
- [264] Aggarwal J, Habicht-Mauche J, Juarez Ch. Application of heavy stable isotopes in forensic isotope geochemistry: A review. *Applied Geochemistry* 2008;23(9) 2658-2666.
- [265] Goguel RL, St. John DA. Chemical identification of Portland cements in New Zealand concretes: I. Characteristics differences among New Zealand cements in minor and trace element chemistry. *Cement and Concrete Research* 1993;23(1) 59-68.
- [266] I.J Graham, R.L Goguel, D.A St John. Use of strontium isotopes to determine the origin of cement in concretes: Case examples from New Zealand. *Cement and Concrete Research* 2000;30(7) 1105-1111.
- [267] Redler L. Quantitative X- ray diffraction analysis of high alumina cements. *Cement and Concrete Research* 1991;21(5) 873-884.
- [268] Midgley HG. Quantitative determination of phases in high alumina cement clinkers by X-ray diffraction. *Cement and Concrete Research* 1976;6(2) 217-223.
- [269] Guirado F, Galí S, Chinchón S . Quantitative Rietveld analysis of aluminous cement clinker phases. *Cement and Concrete Research* 2000;30(7) 1023-1029.
- [270] Wilson W, Krakowiak KJ, Ulm F.-J. Simultaneous assessment of phase chemistry, phase abundance and bulk chemistry with statistical electron probe micro-analyses: Application to cement clinkers. *Cement and Concrete Research* 2014;55 35-48.
- [271] Haach VG, Vasconcelos G, Lourenço PB. Influence of aggregates grading and water/cement ratio in workability and hardened properties of mortars. *Construction and Building Materials* 2011;25(6) 2980-2987.
- [272] Neville AM. *Properties of Concrete*, Fourth Edition. Addison Wesley Longman Ltd.; 1995.
- [273] Wong HS, Buenfeld NR. Determining the water–cement ratio, cement content, water content and degree of hydration of hardened cement paste: Method development and validation on paste samples. *Cement and Concrete Research* 2009;39(10) 957-965.
- [274] Philippidis TP, Aggelis DG. An acousto-ultrasonic approach for the determination of water-to-cement ratio in concrete. *Cement and Concrete Research* 2003;33(4) 525-538.
- [275] Sahu S, Badger S, Thaulow N, Lee RJ. Determination of water–cement ratio of hardened concrete by scanning electron microscopy. *Cement and Concrete Composites* 2004;26(8) 987-992.
- [276] Beygi MHA, Kazemi MT, Nikbin IM, Amiri JV. The effect of water to cement ratio on fracture parameters and brittleness of self-compacting concrete. *Materials & Design* 2013;50 267-276.

- [277] Bescher E, Sambol M, Rice EK, Mackenzie JD. Determination of water-to-cement ratio in freshly mixed rapid-setting calcium sulfoaluminate concrete using 2.45 GHz microwave radiation. *Cement and Concrete Research* 2004;34(5) 807-812.
- [278] Yodsudjai W, Wang K. Chemical shrinkage behavior of pastes made with different types of cements. *Construction and Building Materials* 2013;40 854-862.
- [279] Jankovic A, Valery W, Davis E. Cement grinding optimisation. *Minerals Engineering* 2004;17(11-12) 1075-1081.
- [280] Austin LG, Bagga R, Celik M. Breakage properties of some materials in a laboratory ball mill. *Powder Technology* 1981;28 235-241.
- [281] Bond FC. *Crushing and Grinding Calculations Parts I and II*. British Chemical Engineering 6 (6&8); 1961.
- [282] Morrell S, Shi F, Tondo. Modelling and Scale-up of High Pressure Grinding Rolls. In: *Proceedings of the XX International Mineral Processing Congress (IMPC)*. Aachen: Germany; September 1997.
- [283] Magdalinovic N. Mathematical Model for Determination of an Optimal Crusher Product size. *Aufbereitungs-Technik* 1990;31(5) 277-279.
- [284] Lynch AJ. *Mineral Crushing and Grinding Circuits, Their Simulation, Optimization, Design and Control*. Amsterdam: Elsevier Scientific Publishing Co.; 1977.
- [285] Benzer H, Ergün L, Öner M, Lynch AJ. Simulation of open circuit clinker grinding. *Minerals Engineering* 2001;14(7) 701-710.
- [286] Aldrich Ch. Consumption of steel grinding media in mills - A review. *Minerals Engineering* 2013;49 77-91.
- [287] Katsioti M, Tsakiridis PE, Giannatos P, Tsibouki Z, Marinos J. Characterization of various cement grinding aids and their impact on grindability and cement performance. *Construction and Building Materials* 2009;23(5) 1954-1959.
- [288] Reid KJ. A solution to the batch grinding equation. *Chemical Engineering Science* 1965;20 953-963.
- [289] Deniz V. A study on the specific rate of breakage of cement materials in a laboratory ball mill. *Cement and Concrete Research* 2003;33 439-445.
- [290] Austin LG, Luckie PT. Methods for determination of breakage distribution parameters. *Powder Technology* 1971;5 215-222.
- [291] Kapur PC. *Balling and Granulation*. *Advances in Chemical Engineering* 1978;10 55-123.
- [292] Adetayo AA, Litster JD, Cameron IT. Steady state modelling and simulation of a fertilizer granulation circuit. *Computers & Chemical Engineering* 1995;19 383-393.

- [293] Cotabarren I, Schulz PG, Bucalá V, Piña J. Modelling of an industrial double-roll crusher of a urea granulation circuit. *Powder Technology* 2008;183(2) 224-230.
- [294] Horio M. Binderless granulation - its potential, achievements and future issues. *Powder Technology* 2003;130(1-3) 1-7.
- [295] Saidur R, Hossain MS, Islam MR, Fayaz H, Mohammed HA. A review on kiln system modeling. *Renewable and Sustainable Energy Reviews* 2011;15(5) 2487-2500.
- [296] Mujumdar KS, Ranade VV. Simulation of Rotary Cement Kilns Using a One-Dimensional Model. *Chemical Engineering Research and Design* 2006;84(3) 165-177.
- [297] Mujumdar KS, Ganesh KV, Kulkarni SB, Ranade VV. Rotary Cement Kiln Simulator (RoCKS): Integrated modeling of pre-heater, calciner, kiln and clinker cooler. *Chemical Engineering Science* 2007;62(9) 2590-2607.
- [298] Rademaker O, Goessens LH, Voskamp JH, Debie ACP. Dynamics and control of a clinker cooler. *Automatica* 1970;6(2) 231-244.
- [299] Ahamed JU, Madloul NA, Saidur R, Shahinuddin MI, Kamyar A, Masjuki HH. Assessment of energy and exergy efficiencies of a grate clinker cooling system through the optimization of its operational parameters. *Energy* 2012;46(1) 664-674.
- [300] Stadler KS, Poland J, Gallestey E. Model predictive control of a rotary cement kiln. *Control Engineering Practice* 2011;19(1) 1-9.
- [301] Yuko T, Ikabata T, Akiyama T, Yamamoto T, Kurumada N. New clinker formation process by the fluidized bed kiln system. *Cement and Concrete Research* 2000;30:1113-1120.
- [302] Van Puyvelde DR. Modelling the hold up of lifters in rotary dryers. *Chemical Engineering Research and Design* 2009;87(2) 226-232.
- [303] Barin I. Thermodynamic data of pure substances. Part I Ag – Kr; 1992. ISBN 3-527-28531-8.
- [304] Barin I. Thermodynamic data of pure substances. Part II La – Zr; 1992. ISBN 3-527-28531-8.
- [305] Rodríguez NH, Martínez-Ramírez S, Blanco-Varela MT, Donatello S, Guillem M, Puig J, Fos C, Larrotcha E, Flores J. The effect of using thermally dried sewage sludge as an alternative fuel on Portland cement clinker production. *Journal of Cleaner Production* 2013;52 94-102.
- [306] Tsiliyannis ChA. Alternative fuels in cement manufacturing: Modeling for process optimization under direct and compound operation. *Fuel* 2012;99 20-39.
- [307] Pipilikaki P, Katsioti M, Papageorgiou D, Fragoulis D, Chaniotakis E. Use of tire derived fuel in clinker burning. *Cement and Concrete Composites* 2005;27(7-8) 843-847.

- [308] Valderrama C, Granados R, Cortina JL, Gasol CM, Guillem M, Josa A. Comparative LCA of sewage sludge valorisation as both fuel and raw material substitute in clinker production. *Journal of Cleaner Production* 2013;51 205-213.
- [309] Nakano T, Ichitsubo K, Kurokawa D, Ichikawa M. The effect of cooling rate on the fluidity of mortar made from kiln clinker. *Cement and Concrete Research* 2008;38(5) 643-648.
- [310] Ichikawa M, Ikeda S, Komukai Y. Effect of cooling rate and Na₂O content on the character of the interstitial materials in portland cement clinker. *Cement and Concrete Research* 1994;24(6) 1092-1096.
- [311] Woodson RD. *Concrete Materials Concrete Portable Handbook*; 2012.
- [312] Sverak TS, Baker CGJ, Kozdas O. Efficiency of grinding stabilizers in cement clinker processing. *Minerals Engineering* 2013;43-44 52-57.
- [313] Touil D, Belaadi S, Frances C. The specific selection function effect on clinker grinding efficiency in a dry batch ball mill. *International Journal of Mineral Processing* 2008;87 141-145.
- [314] Bensted J. Effects of the clinker - gypsum grinding temperature upon early hydration of Portland cement. *Cement and Concrete Research* 1982;12(3) 341-348.
- [315] Marzouki A, Lecomte A, Beddey A, Diliberto C, Ouezdou MB. The effects of grinding on the properties of Portland-limestone cement. *Construction and Building Materials* 2013;48 1145-1155.
- [316] Spitas V, Spitas C. Stochastic simulation of the power requirements of dry clinker pulverisation. *International Journal of Mineral Processing* 2012;106-109 42-49.
- [317] Shi F. Comparison of grinding media- cylpebs and balls, *Minerals Engineering* 2004;17 1259-1268.
- [318] Ipek H. The effects of grinding media shape on breakage rate. *Minerals Engineering* 2006;19 91-93.
- [319] Qian HY, Kong QG, Zhang BL. The effects of grinding media shapes on the grinding kinetics of cement clinker in ball mill. *Powder Technology* 2013;235 422-425.
- [320] Deniz V . The effect of mill speed on kinetic breakage parameters of clinker and limestone. *Cement and Concrete Research* 2004;34(8) 1365-1371.
- [321] Wang J.-h, Chen Q.-r, Kuang Y.-l, Lynch AJ, Zhuo J.-w. Grinding process within vertical roller mills: experiment and simulation. *Mining Science and Technology (China)* 2009;19(1) 97-101.
- [322] Sohoni S, Sridhar R, Mandal G. The effect of grinding aids on the fine grinding of limestone, quartz and Portland cement clinker. *Powder Technology* 1991;67(3) 277-286.

- [323] Tsivilis S, Voglis N, Photou J. A study of the intergrinding of clinker and limestone. *Minerals Engineering* 1999;12(7) 837-840.
- [324] Irassar EF, Violini D, Rahhal VF, Milanese C, Trezza MA, Bonavetti VL. Influence of limestone content, gypsum content and fineness on early age properties of Portland limestone cement produced by inter-grinding. *Cement and Concrete Composites* 2011;33(2) 192-200.
- [325] Karamalidis AK, Dzombak DA. *Surface Complexation Modeling: Gibbsite*. Wiley; 2011.
- [326] Gallardo AR, Vegas A. *Zeitschrift für Kristallographie*. The cation array in aluminum oxides, hydroxides and oxihydroxides. 1996;211(5) 299-303.
- [327] Megaw HD. *Zeitschrift für Kristallographie, Mineralogie und Petrographie* 1934;87 185-204.
- [328] Klopogge JT, Duong LV, Wood BJ, Frost RL. XPS study of the major minerals in bauxite: Gibbsite, bayerite and (pseudo-)boehmite. *Journal of Colloid and Interface Science* 2006;296(2) 572-576.
- [329] Milligan WO, McAtee JL. Crystal Structure of γ -AlOOH and γ -ScOOH. *Journal of Physical Chemistry* 1956;60(3) 273-277.
- [330] Christoph GG, Corbato CE, Hofmann A, Tettenhorst RT. The crystal structure of boehmite. *Clays and Clay Minerals* 1979;27(2) 81-86.
- [331] Bosmans HJ. Unit cell and crystal structure of nordstrandite, $\text{Al}(\text{OH})_3$. *Acta Crystallographica, Section B* 1970;26(5) 649-652.
- [332] Hathaway JC, Schlanger SO. Nordstrandite ($\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$) from Guam. *The American Mineralogist* 1965;50 1029-1037.
- [333] El-Katatny EA, Halawy SA, Mohamed MA, Zaki MI. A novel synthesis of high-area alumina via H_2O_2 -precipitated boehmite from sodium aluminate solutions. *Journal of Chemical Technology and Biotechnology* 1998;72(4) 320-328.
- [334] Demichelis R, Civalleri B, Noel Y, Meyer A, Dovesi R. Structure and stability of aluminium trihydroxides bayerite and gibbsite: A quantum mechanical ab initio study with the crystal 06 code. *Chemical Physics Letters* 2008;465(4-6) 220-225.
- [335] Sposito G. *The Environmental Chemistry of Aluminum*. Lewis Publishers is an imprint of CRC Press; 1996. ISBN: 1-56670-030-2.
- [336] Dewey C. Geological section from Williamstown, Mass. to Troy, N. Y. on the Hudson. *American Journal of Science* 1820;2(2) 249.
- [337] Freij SJ, Parkinson GM. Surface morphology and crystal growth mechanism of gibbsite in industrial Bayer liquors. *Hydrometallurgy* 2005;78(3-4) 246-255.

- [338] Bhöm J. Über Aluminium- und Eisenoxide I. Zeitschrift für anorganische und allgemeine Chemie 1925;149 203-210.
- [339] Cai W, Li H, Zhang G. An innovative approach for pseudoboehmite precipitation from seeded sodium aluminate solutions. Journal of Physics and Chemistry of Solids 2010;71(4) 515-518.
- [340] Chao GY, Baker J, Sabina AP, Roberts AC. Doyleite, a new polymorph of $\text{Al}(\text{OH})_3$, and its relationship to bayerite, gibbsite, and nordstrandite. Canadian Mineralogist 1985;23 21-28.
- [341] Van Nordstrad RA, Hettinger WP, Keith CD. A new alumina trihydrate. Nature 1956;177 713-714.
- [342] Jodin M.-C, Gaboriaud F, Humbert B. Limitations of potentiometric studies to determine the surface charge of gibbsite $\gamma\text{-Al}(\text{OH})_3$ particles. Journal of Colloid and Interface Science 2005;287 581-591.
- [343] Kosmulski M. pH-dependent surface charging and points of zero charge. IV. Update and new approach. Journal of Colloid and interface Science 2009;337 439-448.
- [344] Huang PM, Li Y, Sumner ME. Handbook of Soil Sciences: Properties and Processes, Second Edition. CRC Press; 2011. ISBN 978-1-4398-0305-9.
- [345] Kosmulski M. Surface Charging and Points of Zero Charge, CRC, Taylor & Francis; Boca Raton; FL; London; 2009.
- [346] Alwitt RS. The point of zero charge of pseudoboehmite. Journal of Colloids and Interface Science 1972;40 195-198.
- [347] Liu Y, Naidu R, Ming H. Surface electrochemical properties of red mud (bauxite residue): Zeta potential and surface charge density. Journal of Colloid and Interface Science 2013;394 451-457.
- [348] Kabengi NJ, Daroub SH, Rhue RD. Energetics of arsenate sorption on amorphous aluminum hydroxides studied using flow adsorption calorimetry. Journal of Colloid and Interface Science 2006;297(1) 86-94.
- [349] Carre S, Gnep NS, Revel R, Magnoux P. Characterization of the acid-base properties of transition aluminas by model reaction. Applied Catalysis A: General 2008;348 71-78.
- [350] Richardson JT. Principles of Catalyst Development; Plenum Press; London; 1989.
- [351] Du X, Wang Y, Su X, Li J. Influences of pH value on the microstructure and phase transformation of aluminum hydroxide. Powder Technology 2009;192(1) 40-46.
- [352] Sudworth JL, Tilley AR. The Sodium Sulphur Battery. London: Chapman & Hall; 1985.

- [353] Mali A, Petric A. Synthesis of sodium β'' -alumina powder by sol-gel combustion. *Journal of the European Ceramic Society* 2012;32 1229-1234.
- [354] Lu X, Xia G, Lemmon JP, Yang Z. Advanced materials for sodium-beta alumina batteries: Status, challenges and perspectives. *Journal of Power Sources* 2010;195 2431-2442.
- [355] Bragg WL, Gottfried C, West J. The structure of β alumina. *Zeitschrift für Kristallographie- Crystalline Materials* 1931;77(1) 255-274.
- [356] Beevers CA, Ross MAS. The crystal structure of "beta alumina" $\text{Na}_2\text{O} \cdot 11\text{Al}_2\text{O}_3$. *Zeitschrift für Kristallographie* 1937;97 59-66.
- [357] Yamaguchi G, Suzuki K. *Bulletin of the Chemical Society of Japan* 1968;4193-99.
- [358] Bettman M, Peters CR. The crystal structure of $\text{Na}_2\text{O} \cdot \text{MgO} \cdot 5\text{Al}_2\text{O}_3$ with reference to $\text{Na}_2\text{O} \cdot 5\text{Al}_2\text{O}_3$ and other isotypal compounds. *Journal of Physical Chemistry* 1969;73 1774-1780.
- [359] Bourke MAM, Hooper A, Moseley PT, Taylor RG. Sodium-rich beta-alumina. *Solid State Ionics* 1980;1(5-6) 367-372.
- [360] Koh J.-H, Weber N, Virkar AV. Synthesis of lithium-beta-alumina by various ion-exchange and conversion processes. *Solid State Ionics* 2012;220 32-38.
- [361] Kalaigian GP, Seo DJ, Park SB. Characterization of $\text{Sr}\beta$ -alumina prepared by sol-gel and spray pyrolysis methods. *Materials Chemistry and Physics* 2004;85(2-3)286-293.
- [362] Yuji Masubuchi, Tomoyuki Hata, Teruki Motohashi, Shinichi Kikkawa. Crystal structure of Eu-doped magnetoplumbite-type lanthanum aluminum oxynitride with emission site splitting. *Journal of Solid State Chemistry* 2011;184(9) 2533-2537.
- [363] Carrillo-Cabrera W, Thomas JO, Farrington GC. The structure of the lanthanide Gd^{3+} , Eu^{3+} and Nd^{3+} β'' -aluminas. *Solid State Ionics* 1988;28-30 317-323.
- [364] MacKenzie KJD, Temuujin J, Okada K. Thermal decomposition of mechanically activated gibbsite. *Thermochimica Acta* 1999;327(1-2) 103-108.
- [365] Zhu B, Fang B, Li X. Dehydration reactions and kinetic parameters of gibbsite. *Ceramics International* 2010;36(8) 2493-2498.
- [366] Li H, Shao T, Li D, Chen D. Nonisothermal reaction kinetics of diasporic bauxite. *Thermochimica Acta* 2005;427(1-2) 9-12.
- [367] Whittington B, Ilievski D. Determination of the gibbsite dehydration reaction pathway at conditions relevant to Bayer refineries. *Chemical Engineering Journal* 2004;98(1-2) 89-97.
- [368] Alphonse P, Courty M. Structure and thermal behavior of nanocrystalline boehmite. *Thermochimica Acta* 2005;425(1-2) 75-89.

- [369] L'vov BV. Mechanism of thermal decomposition of alkaline-earth carbonates. *Thermochimica Acta* 1997;303 161-170.
- [370] An L, Chan HM, Soni KK. Control of Calcium hexaluminate grain morphology in in-situ toughened ceramic composites. *Journal of Materials Science* 1996;31(12) 3223–3229.
- [371] Vishista K, Gnanam FD. Microstructural development of $\text{SrAl}_{12}\text{O}_{19}$ in alumina–strontia composites. *Journal of the European Ceramic Society* 2009;29(1) 77-83.
- [372] Davar F, Salavati-Niasari M, Baskoutas S. Temperature controlled synthesis of SrCO_3 nanorods via a facile solid-state decomposition rout starting from a novel inorganic precursor. *Applied Surface Science* 2011;257(9) 3872-3877.
- [373] Miller F, Wilkins ChH. Infrared spectra and characteristic frequencies of inorganic ions. Their use in quantitative analysis. *Analytical Chemistry* 1952;24 1253-1274.
- [374] Huang CK, Kerr PF. Infrared study of the carbonate minerals. *The American Mineralogist* 1960;45 311-324.
- [375] Boumaza A, Favaro L, Lédion J, Sattonnay G, Brubach JB, Berthet P, Huntz AM, Roy P, Tétot R. Transition alumina phases induced by heat treatment of boehmite: An X-ray diffraction and infrared spectroscopy study. *Journal of Solid State Chemistry* 2009;182(5) 1171-1176.
- [376] Boumaza A, Djelloul A, Guerrab F. Specific signatures of α -alumina powders prepared by calcination of boehmite or gibbsite. *Powder Technology* 2010;201(2) 177-180.
- [377] Nag A, Kutty TRN. Role of B_2O_3 on the phase stability and long phosphorescence of $\text{SrAl}_2\text{O}_4\text{:Eu, Dy}$. *Journal of Alloys and Compounds* 2003;354(1-2) 221-231.
- [378] Zhou T, Song Z, Bian L, Ren Q, Liu Q. Synthesis and luminescence properties of europium activated $\text{Ca}_3\text{Al}_2\text{O}_6\text{-Sr}_3\text{Al}_2\text{O}_6$ system. *Journal of Rare Earths* 2012;30(7) 632-636.
- [379] Ptáček P, Šoukal F, Opravil T, Bartoníčková E, Zmrzlý M, Novotný R. Synthesis, hydration and thermal stability of hydrates in strontium-aluminate cement. *Ceramics International* 2014;40(7) 9971-9979.
- [380] Hörkner W, Müller-Buschbaum HK. Zur kristallstruktur von CaAl_2O_4 . *Journal of Inorganic and Nuclear Chemistry* 1976;38(5) 983-984.
- [381] E. Ghiasvand, A.A. Ramezaniapour, A.M. Ramezaniapour. Effect of grinding method and particle size distribution on the properties of Portland-pozzolan cement. *Construction and Building Materials* 2014; 53 547-554.
- [382] Bentz DP, Garboczi EJ, Haecker CJ, Jensen OM. Effects of cement particle size distribution on performance properties of Portland cement-based materials. *Cement and Concrete Research* 1999;29(10) 1663-1671.

- [383] Zhang T, Yu Q, Wei J, Zhang P. Effects of size fraction on composition and fundamental properties of Portland cement. *Construction and Building Materials* 2011;25(7) 3038-3043.
- [384] Frigione G, Marra S. Relationship between particle size distribution and compressive strength in portland cement. *Cement and Concrete Research* 1976;6(1) 113-127.
- [385] Celik IB. The effects of particle size distribution and surface area upon cement strength development. *Powder Technology* 2009;188(3) 272-276.
- [386] Vedalakshmi R, Raj AS, Srinivasan S, Babu KG. Quantification of hydrated cement products of blended cements in low and medium strength concrete using TG and DTA technique. *Thermochimica Acta* 2003;407(1-2) 49-60.
- [387] Pane I, Hansen W. Investigation of blended cement hydration by isothermal calorimetry and thermal analysis. *Cement and Concrete Research* 2005;35(6) 1155-1164.
- [388] Lilkov V, Petrov O, Tzvetanova Y, Savov P. Mössbauer, DTA and XRD study of Portland cement blended with fly ash and silica fume. *Construction and Building Materials* 2012;29 33-41.
- [389] Hesse Ch, Goetz-Neunhoeffler F, Neubauer J. A new approach in quantitative in-situ XRD of cement pastes: Correlation of heat flow curves with early hydration reactions. *Cement and Concrete Research* 2011;41(1) 123-128.
- [390] Pang X, Bentz DP, Meyer Ch, Funkhouser GP, Darbe R. A comparison study of Portland cement hydration kinetics as measured by chemical shrinkage and isothermal calorimetry. *Cement and Concrete Composites* 2013;3923-32.
- [391] Xu Q, Hu J, Ruiz JM, Wang K, Ge Z. Isothermal calorimetry tests and modeling of cement hydration parameters. *Thermochimica Acta* 2010;499(1-2) 91-99.
- [392] Gerstig M, Wadsö L. A method based on isothermal calorimetry to quantify the influence of moisture on the hydration rate of young cement pastes. *Cement and Concrete Research* 2010;40(6) 867-874.
- [393] Mostafa NY, Brown PW. Heat of hydration of high reactive pozzolans in blended cements: Isothermal conduction calorimetry. *Thermochimica Acta* 2005;435(2) 162-167.
- [394] Esteves LP. On the hydration of water-entrained cement-silica systems: Combined SEM, XRD and thermal analysis in cement pastes. *Thermochimica Acta* 2011;518(1-2) 27-35.
- [395] Ylmén R, Jäglid U, Steenari B.-M, Panas I. Early hydration and setting of Portland cement monitored by IR, SEM and Vicat techniques. *Cement and Concrete Research* 2009;39(5) 433-439.
- [396] Torrén-Martín D, Fernández-Carrasco L, Martínez-Ramírez S. Hydration of calcium aluminates and calcium sulfoaluminate studied by Raman spectroscopy. *Cement and Concrete Research* 2013;47 43-50.

- [397] Corr DJ, Juenger MCG, Monteiro PJM, Bastacky J. Investigating entrained air voids and Portland cement hydration with low-temperature scanning electron microscopy. *Cement and Concrete Composites* 2004;26(8) 1007-1012.
- [398] Gallucci E, Mathur P, Scrivener K. Microstructural development of early age hydration shells around cement grains. *Cement and Concrete Research* 2010;40(1) 4-13.
- [399] Double DD. Some studies of the hydration of Portland cement using high voltage (1 MV) electron microscopy. *Materials Science and Engineering* 1973;12(1) 29-34.
- [400] Goldschmidt A. About the hydration theory and the composition of the liquid phase of portland cement. *Cement and Concrete Research* 1982;12(6) 743-746.
- [401] Michaux M, Fletcher P, Vidick B. Evolution at early hydration times of the chemical composition of liquid phase of oil-well cement pastes with and without additives. Part I. Additive free cement pastes. *Cement and Concrete Research* 1989;19(3) 443-456.
- [402] Delmi MMY, A.-Mokhtar A, Amiri O. Modelling the coupled evolution of hydration and porosity of cement-based materials. *Construction and Building Materials* 2006;20(7) 504-514.
- [403] Dongyu X, Shifeng H, Lei Q, Lingchao L, Xin C. Monitoring of cement hydration reaction process based on ultrasonic technique of piezoelectric composite transducer. *Construction and Building Materials* 2012;35 220-226.
- [404] Smith A, Chotard T, Gimet-Breart N, Fargeot D. Correlation between hydration mechanism and ultrasonic measurements in an aluminous cement: effect of setting time and temperature on the early hydration. *Journal of the European Ceramic Society* 2002;22(12) 1947-1958.
- [405] Cheng X, Qin L, Zhong QQ, Huang SF, Li ZJ. Temperature and boundary influence on cement hydration monitoring using embedded piezoelectric transducers. *Ultrasonics* 2013;53(2) 412-416.
- [406] Chotard T, Gimet-Breart N, Smith A, Fargeot D, Bonnet JP, Gault C. Application of ultrasonic testing to describe the hydration of calcium aluminate cement at the early age. *Cement and Concrete Research* 2001;31(3) 405-412.
- [407] McCarter WJ. A parametric study of the impedance characteristics of cement-aggregate systems during early hydration. *Cement and Concrete Research* 1994;24(6) 1097-1110.
- [408] Dotelli G, Mari CM. The evolution of cement paste hydration process by impedance spectroscopy. *Materials Science and Engineering: A* 2001;303(1-2) 54-59.
- [409] Zuo Y, Zi J, Wei X. Hydration of cement with retarder characterized via electrical resistivity measurements and computer simulation. *Construction and Building Materials* 2014;53411-418.

- [410] Liao Y, Wei X, Li G. Early hydration of calcium sulfoaluminate cement through electrical resistivity measurement and microstructure investigations. *Construction and Building Materials* 2011;25(4) 1572-1579.
- [411] Brooks JJ, Johari MAM, Mazloom M. Effect of admixtures on the setting times of high-strength concrete. *Cement and Concrete Composites* 2000;22(4) 293-301.
- [412] Ramachandran VS, Malhotra VM. *Superplasticizers: Properties and application in concrete*; 1988. ISBN 0-660-17393-X.
- [413] Janowska-Renkas E. The effect of superplasticizers' chemical structure on their efficiency in cement pastes. *Construction and Building Materials* 2013;38 1204-1210.
- [414] Valcuende M, Marco E, Parra C, Serna P. Influence of limestone filler and viscosity-modifying admixture on the shrinkage of self-compacting concrete. *Cement and Concrete Research* 2012;42(4) 583-592.
- [415] Lothenbach B, Le Saout G, Gallucci E, Scrivener K. Influence of limestone on the hydration of Portland cements. *Cement and Concrete Research* 2008;38(6) 848-860.
- [416] Chakoumakos BC, Lager GA, Fernandez-Baca JA. Refinement of the structures of $\text{Sr}_3\text{Al}_2\text{O}_6$ and the hydrogarnet $\text{Sr}_3\text{Al}_2(\text{OH})_{12}$ by Rietveld analysis of neutron powder diffraction data. *Acta Crystallographica Section C* 1992;48 414-419.
- [417] Mondal P, Jeffery JW. The crystal structure of tricalcium aluminate, $\text{Ca}_3\text{Al}_2\text{O}_6$. *Acta Crystallographica Section B* 31 (1975) 689-697.
- [418] Handy NC, Carter S, Yamaguchi Y, Li S, Turney JM, Schaefer HF. Rovibrational energy levels for the electronic ground state of AlOH . *Chemical Physics Letters* 2006;427(1-3) 14-17.
- [419] Hirota F, Tanimoto M, Tokiwa H. Ab initio study on the AlOH/HAIO system. *Chemical Physics Letters* 1993;208(1-2) 115-119.
- [420] Tarte P. Infra-red spectra of inorganic aluminates and characteristic vibrational frequencies of AlO_4 tetrahedra and AlO_6 octahedra. *Spectrochimica Acta Part A: Molecular Spectroscopy* 1967;23(7) 2127-2143.
- [421] Preudhomme J, Tarte P. Infrared studied of spinel-III: the normal II-III spinel. *Spectrochimica Acta Part A* 1971;27(9) 1817-1835.
- [422] Li X, Wang D, Zhou Q, Liu G, Peng Z. Concentration variation of aluminate ions during the seeded precipitation process of gibbsite from sodium aluminate solution. *Hydrometallurgy* 2011;106(1-2) 93-98.
- [423] Andrews A, Nsiah-Baafi E, Gawu SKY, Olubambi PA. Synthesis of high alumina refractories from lithomargic clay. *Ceramics International* 2014;40(4) 6071-6075.

- [424] Galusek D, Ghillányová K. Ceramic oxides. In: *Ceramics Science and Technology, Volume 2, Materials and Properties*. Ed.: Riedel R and Chen I-Wei; Wiley-VCH; 2010. ISBN: 978-3-527-31156-9.
- [425] Amrane B, Ouedraogo E, Mamen B, Djaknoun S, Mesrati N. Experimental study of the thermo-mechanical behaviour of alumina-silicate refractory materials based on a mixture of Algerian kaolinitic clays. *Ceramics International* 2011;37(8) 3217-3227.
- [426] Lavat AE, Grasselli MC, Lovecchio EG. Effect of α and γ polymorphs of alumina on the preparation of MgAl_2O_4 -spinel-containing refractory cements. *Ceramics International* 2010;36(1) 15-21.
- [427] Reddy NK. Reaction-bonded silicon carbide refractories. *Materials Chemistry and Physics* 2002;76(1) 78-81.
- [428] Pierson HO. *Applications of Refractory Carbides and Nitrides*. Handbook of Refractory Carbides and Nitrides; 1996.
- [429] Schmalzried C, Schwetz K. Silicon Carbide- and Boron Carbide-Based Hard materials. In: *Ceramics Science and Technology, Volume 2, Materials and Properties*. Ed.: Riedel R and Chen I-W; Wiley-VCH; 2010. ISBN: 978-3-527-31156-9.
- [430] Rao MPLN, Gupta GS, Manjunath ., Kumar S, Suri AK, Krishnamurthy N, Subramanian C. Temperature measurements in the boron carbide manufacturing process – A hot model study. *International Journal of Refractory Metals and Hard Materials* 2009;27(3) 621-628.
- [431] Liu G, Li J, Chen K. Combustion synthesis of refractory and hard materials: A review. *International Journal of Refractory Metals and Hard Materials* 2013;39 90-102.
- [432] Lihrmann J.-M. Thermodynamics of the Al_2O_3 – Al_4C_3 system: I. Thermochemical functions of Al oxide, carbide and oxycarbides between 298 and 2100 K. *Journal of the European Ceramic Society* 2008;28(3) 633-642.
- [433] Chen K, Huang Z, Liu Y.-g, Fang M, Huang J, Xu Y. Synthesis of β - Si_3N_4 powder from quartz via carbothermal reduction nitridation. *Powder Technology* 2013;235 728-734.
- [434] Jones MI, Valecillos M.-C, Hirao K, Yamauchi Y. Grain growth in microwave sintered Si_3N_4 ceramics sintered from different starting powders. *Journal of the European Ceramic Society* 2002;22(16) 2981-2988.
- [435] Yu J, Yang J, Li H, Xi X, Huang Y. Study on particle-stabilized Si_3N_4 ceramic foams. *Materials Letters* 2011;65(12) 1801-1804.
- [436] Eichler J, Lesniak Ch. Boron nitride (BN) and BN composites for high-temperature applications. *Journal of the European Ceramic Society* 2008;28(5) 1105-1109.
- [437] Wang Q, He D, Peng F, Xiong , Wang J, Wang P, Xu Ch, Liu J. Compression behavior of nanocrystalline TiN. *Solid State Communications* 2014;182 26-29.

- [438] Kartavykh AV, Tcherdyntsev VV, Zollinger J. TiAl–Nb melt interaction with AlN refractory crucibles. *Materials Chemistry and Physics* 2009;116(1) 300-304.
- [439] Šajgalík P, Lenčič Z, Hnatko M. Nitrides. In: *Ceramics Science and Technology, Volume 2, Materials and Properties*. Ed.: Riedel R and Chen I.-W; Wiley-VCH, 2010. ISBN: 978-3-527-31156-9.
- [440] Taleghani PR, Bakhshi SR, Erfanmanesh M, Borhani GH, Vafaei R. Improvement of MoSi₂ oxidation resistance via boron addition: Fabrication of MoB/MoSi₂ composite by mechanical alloying and subsequent reactive sintering. *Powder Technology* 2014;254:241-247.
- [441] Raju GB, Basu B, Suri AK. Thermal and electrical properties of TiB₂–MoSi₂. *International Journal of Refractory Metals and Hard Materials* 2010;28(2) 174-179.
- [442] Luo M, Li Y, Jin S, Sang S, Zhao L, Wang Q, Li Y. Microstructure and mechanical properties of multi-walled carbon nanotubes containing Al₂O₃–C refractories with addition of polycarbosilane. *Ceramics International* 2013;39(5) 4831-4838.
- [443] Fan H, Li Y, Sang S. Microstructures and mechanical properties of Al₂O₃–C refractories with silicon additive using different carbon sources. *Materials Science and Engineering: A* 2011;528(7-8) 3177-3185.
- [444] Musante L, Martorello LF, Galliano PG, Cavalieri AL, Martinez AGT. Mechanical behaviour of MgO–C refractory bricks evaluated by stress–strain curves. *Ceramics International* 2012;38(5) 4035-4047.
- [445] Musante L, Muñoz V, Labadie MH, Martinez AGT. High temperature mechanical behavior of Al₂O₃–MgO–C refractories for steelmaking use. *Ceramics International* 2011;37(5) 1473-1483.
- [446] Muñoz V, Martinez AGT. Thermal Evolution of Al₂O₃–MgO–C Refractories. *Procedia Materials Science* 2012;1 410-417.
- [447] Sadeghbeigi R. *Refractory Lining Systems. Fluid Catalytic Cracking Handbook (Third Edition)*; 2012.
- [448] Stamenković I, Simić V, Sigulinski F, Martinović P, Stefanović R. Properties of Al₂O₃–SiO₂ heat insulating refractories. *Ceramurgia International* 1977;3(4) 168.
- [449] Schmitt N, Hernandez J.-F, Lamour V, Berthaud Y, Meunier P, Poirier J. Coupling between kinetics of dehydration, physical and mechanical behaviour for high alumina castable. *Cement and Concrete Research* 2000;30(10) 1597-1607.
- [450] Nouri-Khezrabad M, Braulio MAL, Pandolfelli VC, Golestani-Fard F, Rezaie HR. Nano-bonded refractory castables. *Ceramics International* 2013;39(4) 3479-3497.
- [451] Zhou N, Hu S, Zhang S. Advances in modern refractory castables, *CN-Refractories* 2004;13(2) 3-12.

- [452] Zhou N. New castables and their role in advancements in monolithic refractories. *Interceram* 2006;55(1) 24-26.
- [453] Deville HS.-C. On the compositions of different alloys. *Annales des Chimie et des Physique* 1856;46(3) 418-420.
- [454] Soc J, de Lafarge PA. French patent applications 320290; 39454; 1908.
- [455] Parr Ch, Bier TA, Bunt NE, Spreafico E. Calcium aluminate cement (CAC) based castables for demanding applications. Technical Paper (Ref.TP-GB-RE-LAF-007) presented at the 1st Monolithics Conference; Teheran; Iran; 1997.
- [456] Guirado F, Galí S, Chinchón JS. Thermal Decomposition of Hydrated Alumina Cement (CAH₁₀). *Cement and Concrete Research* 1998;28(3) 381-390.°
- [457] Mostafa NY, Zaki ZI, Elkader OHA. Chemical activation of calcium aluminate cement composites cured at elevated temperature. *Cement and Concrete Composites* 2012;34(10) 1187-1193.
- [458] Luz AP, Pandolfelli VC. CaCO₃ addition effect on the hydration and mechanical strength evolution of calcium aluminate cement for endodontic applications. *Ceramics International* 2012;38(2) 1417-1425.
- [459] Antonovič V, Kerienė J, Boris R, Aleknevičius M. The Effect of Temperature on the Formation of the Hydrated Calcium Aluminate Cement Structure. *Procedia Engineering* 2013;57 99-106.
- [460] Kopanda JE, Maczura G. Production Processes, Properties, and Applications for Calcium Aluminate Cements. Aluminum Company of America; Pittsburg 1987;15212 171-183.
- [461] Cardoso FA, Innocentini MDM, Akiyoshi MM, Pandolfelli VC. Effect of curing time on the properties of CAC bonded refractory castables. *Journal of the European Ceramic Society* 2004;24(7) 2073-2078.
- [462] Gungor A, Celikcioglu O, Sahin S. The physical and mechanical properties of alumina-based ultralow cement castable refractories. *Ceramics International* 2012;38(5) 4189-4194.
- [463] Karadeniz E, Gurcan C, Ozgen S, Aydin S. Properties of alumina based low-cement self flowing castable refractories. *Journal of the European Ceramic Society* 2007;27(2-3) 1849-1853.
- [464] Karamian E, Monshi A. Influence of additives on nano-SiC whisker formation in alumina silicate-SiC-C monolithic refractories. *Ceramics International* 2010;36(2) 811-816.
- [465] Auvray JM, Gault C, Huger M. Microstructural changes and evolutions of elastic properties versus temperature of alumina and alumina-magnesia refractory castables. *Journal of the European Ceramic Society* 2008;28(10) 1953-1960.

- [466] Braulio MAL, Morbioli GG, Milanez DH, Pandolfelli VC. Calcium aluminate cement source evaluation for Al_2O_3 -MgO refractory castables. *Ceramics International* 2011;37(1) 215-221.
- [467] Braulio MAL, Tontrup C, Medeiros J, Pandolfelli VC. Colloidal alumina as a novel castable bonding system, *Refractories World-forum* 2011;3(3)136-141.
- [468] Hongo Y. α -alumina bonded castable refractories. *Taikabutsu Overseas* 1988;40(4)226-229.
- [469] Ma W, Brown PW. Mechanisms of reaction of hydratable aluminas. *Journal of the American Ceramic Society* 1999;82(2) 453-456.
- [470] Cardoso FA, Innocentini MDM, Miranda MFS, Valenzuela FAO, Pandolfelli VC. Drying behavior of hydratable alumina-bonded refractory castables. *Journal of the European Ceramic Society* 2004;24(5) 797-802.
- [471] Miśta W, Wrzyszczyński J. Rehydration of transition aluminas obtained by flash calcination of gibbsite. *Thermochimica Acta* 1999;331(1) 67-72.
- [472] Violante A, Huang PM. Formation Mechanism of Aluminum Hydroxide Polymorphs. *Clays and Clay Minerals* 1993;41 590-597.
- [473] S. Mukhopadhyay, S. Ghosh, M.K. Mahapatra, R. Mazumder, P. Barick, S. Gupta, S. Chakraborty. Easy-to-use mullite and spinel sols as bonding agents in a high-alumina based ultra low cement castable. *Ceramics International* 2002;28(7) 719-729.
- [474] Mukhopadhyay S, Sen S, Maiti T, Mukherjee M, Nandy RN, Sinhamahapatra BK. In situ spinel bonded refractory castable in relation to co-precipitation and sol-gel derived spinel forming agents. *Ceramics International* 2003;29(8) 857-868.
- [475] Risbud SH, Pask JA. SiO_2 - Al_2O_3 metastable phase equilibrium diagram without mullite. *Journal of Materials Science* 1978;13 2449-2454.
- [476] Abo-El-Enein SA, Abou-Sekkina MM, Khalil Nagy M, Osama A. Shalma. Microstructure and refractory properties of spinel containing castables. *Ceramics International* 2010;36(5) 1711-1717.
- [477] Ahari KG, Sharp JH, Lee WE. Hydration of refractory oxides in castable bond systems-II: alumina-silica and magnesia-silica mixtures. *Journal of the European Ceramic Society* 2003;23(16) 3071-3077.
- [478] Braulio MAL, Bittencourt LRM, Pandolfelli VC. Selection of binders for in situ spinel refractory castables. *Journal of the European Ceramic Society* 2009;29(13) 2727-2735.
- [479] Salomão R, Pandolfelli VC. The role of hydraulic binders on magnesia containing refractory castables: Calcium aluminate cement and hydratable alumina. *Ceramics International* 2009;35(8) 3117-3124.

- [480] Otroj S, Bahrevar MA, Mostarzadeh F, Nilforoshan MR. The effect of deflocculants on the self-flow characteristics of ultra low-cement castables in Al_2O_3 -SiC-C systém. *Ceramics International* 2005;31(5) 647-653.
- [481] Evangelista PC, Parr C. Control of formulation and optimization of self-flow castables based on pure calcium aluminates. *Refractories Applications and News* 2002;7 14-18.
- [482] Pinto DG, Silva AP, Segadães AM, Devezas TC. Thermomechanical evaluation of self-flowing refractory castables with and without the addition of aluminate cement. *Ceramics International* 2012;38(4) 3483-3488.
- [483] Ukrainczyk N, Matusinovic T, Kurajica S, Zimmermann B, Sipusic J. Dehydration of a layered double hydroxide- C_2AH_8 . *Thermochim Acta* 2007;464(1-2) 7-15.
- [484] Luz AP, Neto ABS, Santos Jr. T, Medeiros J, Pandolfelli VC. Mullite-based refractory castable engineering for the petrochemical industry. *Ceramics International* 2013;39(8) 9063-9070.
- [485] Dinger DR, Funk JE. Particle packing II: review of packing of polydisperse particle systems. *Interceramic* 1992;41 95-97.
- [486] Silva AP, Segadães AM, Pinto DG, Oliveira LA, Devezas TC. Effect of particle size distribution and calcium aluminate cement on the rheological behaviour of all-alumina refractory castables. *Powder Technology* 2012;226 107-113.
- [487] Lange F, Mörtel H, Rudert V. Dense packing of cement pastes and resulting consequences on mortar properties. *Cement and Concrete Research* 1997;27(10) 1481-1488.
- [488] Oliveira IR, Ortega FS, Pandolfelli VC. Hydration of CAC cement in a castable refractory matrix containing processing additives. *Ceramics International* 2009;35(4) 1545-1552.
- [489] Zhou X, Sankaranarayanan K, Rigaud M. Design of bauxite-based low-cement pumpable castables: a rheological approach. *Ceramics International* 2004;30(1) 47-55.
- [490] Andrews A, Adam J, Gawu SKY. Development of fireclay aluminosilicate refractory from lithomargic clay deposits. *Ceramics International* 2013;39(1) 779-783.
- [491] Tseng T.-T, Wu H.-M, Chen Ch.-N, Cheng Ch.-Ch, Uan J.-Y, Wu W, Tseng W.J. Refractory filler sands with core-shell composite structure for the taphole nozzle in slide-gate system of steel ladles. *Ceramics International* 2012;38(2) 967-971.
- [492] Merzouki T, Blond E, Schmitt N, Bouchetou M-L, Cutard T, Gasser A. Modelling of the swelling induced by oxidation in SiC-based refractory castables. *Mechanics of Materials* 2014;68 253-266.
- [493] Luz AP, Miglioli MM, Souza TM, Hashimoto S, Zhang S, Pandolfelli VC. Effect of Al_4SiC_4 on the Al_2O_3 single bond SiC single bond SiO_2 single bond C refractory castables performance. *Ceramics International* 2012;38(5) 3791-3800.

- [494] Aksel C. The influence of zircon on the mechanical properties and thermal shock behaviour of slip-cast alumina–mullite refractories. *Materials Letters* 2002;57(4) 992-997.
- [495] Aksel C, Dexet M, Logen N, Porte F, Riley FL, Konieczny F. The influence of zircon in a model aluminosilicate glass tank forehearth refractory. *Journal of the European Ceramic Society* 2003;23(12) 2083-2088.
- [496] Zargar HR, Oprea C, Oprea G, Troczynski T. The effect of nano- Cr_2O_3 on solid-solution assisted sintering of MgO refractories. *Ceramics International* 2012;38(8) 6235-6241.
- [497] Kim T, Kim D, Kang S. Effect of additives on the sintering of MgAl_2O_4 . *Journal of Alloys and Compounds* 2014;587 594-599.
- [498] Sutcu M, Akkurt S, Bayram A, Uluca U. Production of anorthite refractory insulating firebrick from mixtures of clay and recycled paper waste with sawdust addition. *Ceramics International* 2012;38(2) 1033-1041.
- [499] Demir I, Baspınar MS, Orhan M. Utilization of kraft pulp production residues in clay brick production. *Building and Environment* 2005;40(11) 1533–1537.
- [500] Sutcu M, Akkurt S. The use of recycled paper processing residues in making porous brick with reduced thermal conductivity. *Ceramics International* 2009;35(7) 2625–2631.
- [501] Sutcu M, Akkurt S. Utilization of recycled paper processing residues and clay of different sources for the production of porous anorthite ceramics. *Journal of the European Ceramic Society* 2010;30(8) 1785-1793.
- [502] ASTM C155-97; Standard Classification of Insulating Firebrick. ASTM International, West Conshohocken, PA; 2002.
- [503] ASTM Standard C134-95; Standard Test Methods for Size, Dimensional Measurements, and Bulk Density of Refractory Brick and Insulating Firebrick. ASTM International, West Conshohocken, PA; 2005.
- [504] ASTM Standard C20; Standard Test Methods for Apparent Porosity, Water Absorption, Apparent Specific Gravity, and Bulk Density of Burned Refractory Brick and Shapes by Boiling Water. ASTM International, West Conshohocken, PA; 2005.
- [505] ASTM C133-97; Standard Test Methods for Cold Crushing Strength and Modulus of Rupture of Refractories. ASTM International, West Conshohocken, PA; 2003.
- [506] ASTM C1171-96; Standard Test Method for Quantitatively Measuring the Effect of Thermal Shock and Thermal Cycling on Refractories. ASTM International, West Conshohocken, PA; 2003.
- [507] Chudzik S. Measurement of thermal parameters of a heat insulating material using infrared thermography. *Infrared Physics & Technology* 2012;55(1) 73-83.

- [508] Gong L, Wang Y, Cheng X, Zhang R, Zhang H. A novel effective medium theory for modelling the thermal conductivity of porous materials. *International Journal of Heat and Mass Transfer* 2014;68 295-298.
- [509] Hirao K, Yhou Y. Thermal conductivity. In: *Ceramics Science and Technology, Volume 2, Materials and Properties*. Ed.: Riedel R, Chen I-W; Wiley-VCH; 2010. ISBN: 978-3-527-31156-9.
- [510] Bart GCJ, Hoogendoorn CJ, Schaareman PBJ. Stationary and transient heat conduction in a non homogeneous material. *Wärme - und Stoffübertragung* 1986;20(4) 269-272.
- [511] Tritt TM. *Thermal Conductivity, Theory, Properties, and Applications*. Springer; 2004. ISBN 978-0-306-48327-1.
- [512] Carson JK, Lovatt SJ, Tanner DJ, Cleland AC. Thermal conductivity bounds for isotropic, porous materials. *International Journal of Heat and Mass Transfer* 2005;48(11) 2150-2158.
- [513] Carson JK. Review of effective thermal conductivity models for foods. *International Journal of Refrigeration* 2006;29(6)958-967.
- [514] Wang J, Carson JK, North MF, Cleland DJ. A new structural model of effective thermal conductivity for heterogeneous materials with co-continuous phases. *International Journal of Heat and Mass Transfer* 2008;51(9-10) 2389-2397.
- [515] Franc J, Kingery WD. Thermal conductivity: IX, Experimental investigation of effect of porosity on thermal conductivity. *Journal of the American Ceramic Society* 1954;37 99-107.
- [516] Han Y, Li C, Bian Ch, Li S, Wang Ch.-A. Porous anorthite ceramics with ultra-low thermal conductivity. *Journal of the European Ceramic Society* 2013;33(13-14) 2573-2578.
- [517] Barea R, Osendi MI, Ferreira JMF, Miranzo P. Thermal conductivity of highly porous mullite material. *Acta Materialia* 2005;53(11) 3313-3318.
- [518] Progelhof RC, Throne JL, Ruetsch RR. Methods for predicting the thermal conductivity of composite systems: a review. *Polymer Engineering & Science* 1976;16(9) 615-625.
- [519] Cheng P, Hsu CT. The effective stagnant thermal conductivity of porous media with periodic structures. *Journal of Porous Media* 1999;2(1) 19-38.
- [520] Brailsford AD, Major KG. The thermal conductivity of aggregates of several phases including porous materials. *British Journal of Applied Physics* 1964;15 313-319.
- [521] Dondero M, Cisilino AP, Carella JM, Pablo TJ. Effective thermal conductivity of functionally graded random micro-heterogeneous materials using representative volume

- element and BEM. *International Journal of Heat and Mass Transfer* 2011;54(17-18) 3874-3881.
- [522] Wang J, Carson JK, North MF, Cleland DJ. A new approach to modelling the effective thermal conductivity of heterogeneous materials. *International Journal of Heat and Mass Transfer* 2006;49(17-18) 3075-3083.
- [523] Kirkpatrick S. Percolation and conduction. *Reviews of Modern Physics* 1973;45 574-588.
- [524] Fricke H. A mathematical treatment of the electric conductivity and capacity of disperse systems I. The electric conductivity of a suspension of homogeneous spheroids. *Physical Review* 1924;24(5) 575-587.
- [525] Hamilton RL, Crosser OK. Thermal conductivity of heterogeneous two-component systems. *Industrial & Engineering Chemistry Fundamentals* 1962;1 187-191.
- [526] Levy FL. A modified Maxwell-Eucken equation for calculating the thermal conductivity of two-component solutions or mixtures. *International Journal of Refrigeration* 1981;4(4) 223-225.
- [527] Gong L, Wang Y, Cheng X, Zhang R, Zhang H. Thermal conductivity of highly porous mullite materials. *International Journal of Heat and Mass Transfer* 2013;67253-259.
- [528] Smith BH, Szyniszewski S, Hajjar JF, Schafer BW, Arwade SR. Steel foam for structures: A review of applications, manufacturing and material properties. *Journal of Constructional Steel Research* 2012;71 1-10.
- [529] Friberg SE. Foams from non-aqueous systems. *Current Opinion in Colloid & Interface Science* 2010;15 359-364.
- [530] Jang W.-Y, Kraynik AM, Kyriakides S. On the microstructure of open-cell foams and its effect on elastic properties. *International Journal of Solids and Structures* 2008;45 1845-1875.
- [531] Luyten J, Mullens S, Coymans J, De Wilde AM, Thijs I, Kemps R. Different methods to synthesize ceramic foams. *Journal of the European Ceramic Society* 2009;29 829-832.
- [532] Carey E, Stubenrauch C. Free drainage of aqueous foams stabilized by mixtures of a non-ionic (C12DMPO) and an ionic (C12TAB) surfactant. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2013;419 7-14.
- [533] Malysa K, Lunkenheimer K. Foams under dynamic conditions. *Current Opinion in Colloid & Interface Science* 2008;13 150-162.
- [534] Grassia P, Neethling SJ, Cervantes C, Lee HT. The growth, drainage and bursting of foams. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2006;274110-124.

- [535] Kim H, Lee S, Han Y, Park JK. Control of pore size in ceramic foams: Influence of surfactant concentration. *Materials Chemistry and Physics* 2009;113 441-444.
- [536] Wang M, Du H, Guo A, Hao R, Hou Z. Microstructure control in ceramic foams via mixed cationic/anionic surfactant. *Materials Letters* 2012;88(1) 97-100.
- [537] Twigg MV, Richardson JT. Theory and Applications of Ceramic Foam Catalysts. *Chemical Engineering Research and Design* 2002;80 183-189.
- [538] Juettner T, Moertel H, Svinka V, Svinka R. Structure of kaoline–alumina based foam ceramics for high temperature applications. *Journal of the European Ceramic Society* 2007;27(2-3) 1435-1441.
- [539] Lee HT, Neethling SJ, Cilliers JJ. Particle and liquid dispersion in foams. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2005;263 320-329.
- [540] Drenckhan W, Langevin D. Monodisperse foams in one to three dimensions. *Current Opinion in Colloid & Interface Science* 2010;15 341-358.
- [541] Kruglyakov PM, Karakashev SI, Nguyen AV, Vilkova NG. Foam drainage. *Current Opinion in Colloid & Interface Science* 2008;13 163-170.
- [542] Britan A, Liverts M, Ben-Dor G, Koehler SA, Bennani N. The effect of fine particles on the drainage and coarsening of foam. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2009;344 15-23.
- [543] Kaptay G. Interfacial criteria for stabilization of liquid foams by solid particles. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2003;230 67-80.
- [544] Hunter TN, Pugh RJ, Franks GV, Jameson GJ. The role of particles in stabilising foams and emulsions. *Advances in Colloid and Interface Science* 2008;137 57-81.
- [545] Zhang S, Sun D, Dong X, Li C, Xu J. Aqueous foams stabilized with particles and nonionic surfactants. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2008;324 1-8.
- [546] Horozov TS. Foams and foam films stabilised by solid particles. *Current Opinion in Colloid & Interface Science* 2008;13 134-140.
- [547] Peng HX, Fan Z, Evans JRG. Factors affecting the microstructure of a fine ceramic foam. *Ceramics International* 2000;26 887-895.
- [548] Yu J, Sun X, Li Q, Li X. Preparation of Al_2O_3 and $\text{Al}_2\text{O}_3\text{-ZrO}_2$ ceramic foams with adjustable cell structure by centrifugal slip casting. *Materials Science and Engineering: A* 2008;476 274-280.
- [549] Montanaro L, Jorand Y, Fantozzi G, Negro A. Ceramic foams by powder processing. *Journal of the European Ceramic Society* 1998;18 1339-1350.

- [550] Nor MAAM, Hong LCh, Ahmad ZA, Akil HM. Preparation and characterization of ceramic foam produced via polymeric foam replication method. *Journal of Materials Processing Technology* 2008;207 235-239.
- [551] Dressler M, Reinsch S, Schadrack R, Benemann S. Burnout behavior of ceramic coated open cell polyurethane (PU) sponges. *Journal of the European Ceramic Society* 2009;29 3333-3339.
- [552] Akpınar S, Kusoglu IM, Ertugrul O, Onel K. Silicon carbide particle reinforced mul-lite composite foams. *Ceramics International* 2012;38 6163-6169.
- [553] de Sousa E, Rambo CR, Hotza D, de Oliveira APN, Fey T, Greil P. Microstructure and properties of LZSA glass-ceramic foams. *Materials Science and Engineering: A* 2008;476 89-97.
- [554] Guo X, Zhou Z, Ma G, Wang S, Zhao S, Zhang Q. Effect of forming process on the integrity of pore-gradient Al_2O_3 ceramic foams by gelcasting. *Ceramics International* 2012;38 713-719.
- [555] Bartuli C, Bemporad E, Tulliani JM, Tirillò J, Pulci G, Sebastiani M. Mechanical properties of cellular ceramics obtained by gel casting: Characterization and modeling. *Journal of the European Ceramic Society* 2009;29 2979-2989.
- [556] Potoczek M, Zima A, Paszkiewicz Z, Ślósarczyk A. Manufacturing of highly porous calcium phosphate bioceramics via gel-casting using agarose. *Ceramics International* 2009;35 2249-2254.
- [557] Prabhakaran K, Ananthakumar S, Pavithran C. Gel Casting of Alumina using Boehmite as a Binder. *Journal of the European Ceramic Society* 1999;19 2875-2881.
- [558] Sundermann E, Viedt J. Method of manufacturing ceramic foam bodies. US Pat no. 3 745 201; 1973.
- [559] Xu Ch, Wang S, Flodström K, Mao X, Guo J. Cellular silica-based ceramics prepared by direct foaming at high temperature. *Ceramics International* 2010;6(3) 923-927.
- [560] Nambiar EKK, Ramamurthy K. Air void characterisation of foam concrete. *Cement and Concrete Research* 2007;37(2) 221-230.
- [561] Ranjani GIS, Ramamurthy K. Behaviour of foam concrete under sulphate environments. *Cement and Concrete Composites* 2012;34(7) 825-834.
- [562] Huang J.-S, Cheng Ch.-K. Fracture toughness variability of foamed alumina cements. *Cement and Concrete Research* 2004;34(5) 883-888.
- [563] Huang J.-S, Lin J.-Y, Jang M.-J. Stress relaxation of foamed high-alumina cement paste. *Cement and Concrete Research* 2005;35(8) 1503-1509.
- [564] Jitchaiyaphum K, Sinsiri T, Chindaprasirt P. Cellular Lightweight Concrete Containing Pozzolan Materials. *Procedia Engineering* 2011;14 1157-1164.

- [565] Chen X, Yan Y, Liu Y, Hu Z. Utilization of circulating fluidized bed fly ash for the preparation of foam concret. *Construction and Building Materials* 2014;54:137-146.
- [566] Li G, Muthyala VD. Acement based syntactic foam. *Materials Science and Engineering: A* 2008;478(1-2) 77-86.
- [567] Akthar FK, Evans JRG. High porosity (> 90%) cementitious foams. *Cement and Concrete Research* 2010;40(2) 352-358.
- [568] Just A, Middendorf B. Microstructure of high-strength foam concrete. *Materials Characterization* 2009;60(7) 741-748.
- [569] Panesar DK. Cellular concrete properties and the effect of synthetic and protein foaming agents. *Construction and Building Materials* 2013;44 575-584.
- [570] Valore RC. Cellular concrete part 1, Composition and methods of production. published in *American Concrete Institute Journal* 1954;50 773-796.
- [571] Ramamurthy K, Nambiar EKK, Ranjani GIS. A classification of studies on properties of foam concrete. *Cement and Concrete Composites* 2009;31(6) 388-396.
- [572] Nora KH, Natascha S, Regine VK. Effects of oppositely charged surfactants on the stability of foam films. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2011;382 165-173.
- [573] Simjoo M, Rezaei T, Andrianov A, Zitha PLJ. Foam stability in the presence of oil: Effect of surfactant concentration and oil type. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2013;438 148-158.
- [574] Stevenson P. Inter-bubble gas diffusion in liquid foam. *Current Opinion in Colloid & Interface Science* 2010;15(5) 374-381.
- [575] Vivaldini DO, Salvini VR, Luz AP, Pandolfelli VC. Road maps for processing foams containing particles. *Ceramics International* 2013;39(6) 6153-6163.
- [576] Haw M. Colloidal suspensions, Brownian motion, molecular reality: a short history, *Journal of Physics: Condensed Matter* 2002;14 7769-7779.
- [577] Ptáček P, Lang K, Šoukal F, Opravil T, Bartoníčková E, Tvrdík L. Preparation and properties of enstatite ceramic foam from talc. *Journal of the European Ceramic Society* 2014;34(2) 515-522.
- [578] Ptáček P, Lang K, Šoukal F, Opravil T, Tvrdík L, Novotný R. Preparation and properties of nanostructured ceramic foam from kaolinite. *Powder Technology* 2014;253 29-34.
- [579] Vaou V, Panias D. Thermal insulating foamy geopolymers from perlite. *Minerals Engineering* 2010;23(14) 1146-1151.
- [580] Manu KM, Joseph T, Sebastian MT. Temperature compensated $\text{Sr}_2\text{Al}_2\text{SiO}_7$ ceramic for microwave applications. *Materials Chemistry and Physics* 2012;133(1) 21-23.

- [581] Dear PS. Isomorphism of åkermanite and strontio-gehlenite. *Lithos* 1970;3(1) 13-16.
- [582] De Aza AH, Turrillas X, Rodriguez MA, Duran T, Pena P. Time-resolved powder neutron diffraction study of the phase transformation sequence of kaolinite to mullite. *Journal of the European Ceramic Society* 2014;34(5) 1409-1421.
- [583] Zhou HM, Qiao XC, Yu JG. Influences of quartz and muscovite on the formation of mullite from kaolinite. *Applied Clay Science* 2013;80-81 176-181.
- [584] Kobayashi Y, Inagaki M. Preparation of reactive Sr-celsian powders by solid-state reaction and their sintering. *Journal of the European Ceramic Society* 2004;24(2) 399-404.
- [585] Ptáček P, Šoukal F, Opravil T, Havlica J, Brandštetr J. Crystallization of spinel phase from metakaoline: The nonisothermal thermodilatometric CRH study. *Powder Technology* 243;2013 40-45.
- [586] Ptáček P, Křečková M, Šoukal F, Opravil T, Havlica J, Brandštetr J. The kinetics and mechanism of kaolin powder sintering I. The dilatometric CRH study of sinter-crystallization of mullite and cristobalite. *Powder Technology* 2012;232 24-30.
- [587] Ptáček P, Šoukal F, Opravil T, Nosková M, Havlica J, Brandštetr J. Mid-infrared spectroscopic study of crystallization of cubic spinel phase from metakaolin. *Journal of Solid State Chemistry* 2011;184(10) 2661-2667.
- [588] Jin X.-H, Gao L, Guo J.-K. The structural change of diphasic mullite gel studied by XRD and IR spectrum analysis. *Journal of the European Ceramic Society* 2002;22(8) 1307-1311.
- [589] Voll D, Angerer P, Beran A, Schneider H. A new assignment of IR vibrational modes in mullite. *Vibrational Spectroscopy* 2002;30(2) 237-243.
- [590] Birchall JD, Howard AJ, Kendall K. Flexural strength and porosity of cements. *Nature* 1981;289 388-389.
- [591] Drabik M, Mojumdar SC, Slade RCT. Prospects of novel macro-defect-free cements for the new millenium. *Ceramics – Silikaty* 2001;46(2) 68-73.
- [592] Donatello S, Tyrer M, Cheeseman CR. Recent developments in macro-defect-free (MDF) cements. *Construction and Building Materials* 2009;23(5) 1761-1767.
- [593] Šoukal F, Másilko J, Havlica J, Ptáček P, Opravil T. Temperature and moisture effect of macrodefect-free composite structure and properties. *Chemické Listy* 2008;102 s265–s1309.
- [594] Alfani R, Colombet P, D' amore A, Rizzo N, Nicolais L. Effect of temperature on thermo-mechanical properties of macro-defect-free cement–polymer composite. *Journal of Materials Science* 1999;34 5683-5687.

- [595] Pushpalal GKD, Kobayashi T, Hasegawa M. High alumina cement-phenol resin composite: water resistivity and effect of post hydration of unreacted cement on durability. *Cement and Concrete Research* 1997;27(9) 1393-1405.
- [596] Pushpalal GKD, Kobayashi T, Kawano T, Maeda N. The processing, properties, and applications of calcium aluminate-phenol resin composite. *Cement and Concrete Research* 1999;29(1) 121-132.
- [597] McHugh AJ, Walberer JA. Rheology and structuring in organo-ceramic composites. *Composites Part A: Applied Science and Manufacturing* 2001;32(8) 1085-1093.
- [598] Pushpalal GKD, Kawano T, Kobayashi T, Hasegawa M. Chemical Characterization of Calcium Aluminate-Phenol Resin Composite. *Advanced Cement Based Materials* 1997;6(2) 45-52.
- [599] Hewlett PC, Lea's Chemistry of Cement and Concrete. Fourth edition; Elsevier Ltd.; 1988. ISBN: 978-0-7506-6256-7.
- [600] Wu Z, Naik TR. Properties of concrete produced from multicomponent blended cements. *Cement and Concrete Research* 2002;32(12) 1937-1942.
- [601] Antiohos SK, Papadakis VG, Chaniotakis E, Tsimas S. Improving the performance of ternary blended cements by mixing different types of fly ashes. *Cement and Concrete Research* 2007;37(6) 877-885.
- [602] Pal SC, Mukherjee A, Pathak SR. Investigation of hydraulic activity of ground granulated blast furnace slag in concrete. *Cement and Concrete Research* 2003;33(9) 1481-1486.
- [603] Mostafa NY, El-Hemaly SAS, Al-Wakeel EI, El-Korashy SA, Brown PW. Characterization and evaluation of the hydraulic activity of water-cooled slag and air-cooled slag. *Cement and Concrete Research* 2001;31(6) 899-904.
- [604] Mostafa NY, El-Hemaly SAS, Al-Wakeel EI, El-Korashy SA, Brown PW. Hydraulic activity of water-cooled slag and air-cooled slag at different temperatures. *Cement and Concrete Research* 2001;31(3) 475-484.
- [605] Singh NB, Bhattacharjee KN, Shukla AK. Effect of alkali bypass dust on the hydration of granulated blast furnace slag blended cement. *Cement and Concrete Research* 1995;25(4) 883-892.
- [606] Bijen J. Benefits of slag and fly ash. *Construction and Building Materials* 1996;10(5) 309-314.
- [607] Erdem TK, Meral Ç, Tokyay M, Erdoğan TY. Use of perlite as a pozzolanic addition in producing blended cements. *Cement and Concrete Composites* 2007;29(1) 13-21.
- [608] Uzal B, Turanli L. Studies on blended cements containing a high volume of natural pozzolans. *Cement and Concrete Research* 2003;33(11) 1777-1781.

- [609] Hossain KMA. Blended cement using volcanic ash and pumice. *Cement and Concrete Research* 2003;33(10) 1601-1605.
- [610] Rasheeduzzafar, Hussain ES, Al-Gahtani AS. Pore solution composition and reinforcement corrosion characteristics of microsilica blended cement concrete. *Cement and Concrete Research* 1991;21(6) 1035-1048.
- [611] Malhotra VM, Hammings RT. Blended cements in North America - A review. *Cement and Concrete Composites* 1995;17(1) 23-35.
- [612] Ramachandran VS, Paroli RM, Beaudoin JJ, Delgado AH. *Handbook of Thermal Analysis of Construction Materials*. William Andrew; 2002. ISBN: 0-8155-1487-5
- [613] Rivas-Mercury JM, Pena P, de Aza AH, Turrillas X. Dehydration of $\text{Ca}_3\text{Al}_2(\text{SiO}_4)_y(\text{OH})_{4(3-y)}$ ($0 < y < 0.176$) studied by neutron thermodiffractometry. *Journal of the European Ceramic Society* 2008;28(9) 1737-1748.
- [614] Maitra S, Bose S, Bandyopadhyay N, Roychoudhury A. Dehydration kinetics of calcium aluminate cement hydrate under non-isothermal conditions. *Ceramics International* 2005;31(3) 371-374.
- [615] Carlson ET. A study of some strontium aluminate and calcium - strontium aluminate solid solutions, *Journal of research of the National Bureau of Standards* 1955;54 2334-2595.
- [616] Desmoulins H, Malo S, Boudin S, Caignaert V, Hervieu M. Polymorphism of the iron doped strontium aluminate $\text{SrAl}_{1.5}\text{Fe}_{0.5}\text{O}_4$. *Journal of Solid State Chemistry* 2009;182(7) 1806-1820.
- [617] Macphee DE, Lachowski EE. Cement Components and Their Phase Relations. In Lea's *Chemistry of Cement and Concrete*; ed. Hewltett PC; 1998. ISBN: 978-0-7506-6256-7.
- [618] Stöber S, Redhammer G, Schorr S, Prokhnenko O, Pöllmann H. Structure refinements of members in the brownmillerite solid solution series $\text{Ca}_2\text{Al}_x(\text{Fe}_{0.5}\text{Mn}_{0.5})_{2-x}\text{O}_{5+\delta}$ with $1/2 \leq x \leq 4/3$. *Journal of Solid State Chemistry* 2013;197420-428.
- [619] Sullivan E, Greaves C. Fluorine insertion reactions of the brownmillerite materials $\text{Sr}_2\text{Fe}_2\text{O}_5$, $\text{Sr}_2\text{CoFeO}_5$, and $\text{Sr}_2\text{Co}_2\text{O}_5$. *Materials Research Bulletin* 2012;47(9) 2541-2546.
- [620] Yang Y, Cao Z, Jiang Y, Liu L, Sun Y. Photoinduced structural transformation of SrFeO_3 and $\text{Ca}_2\text{Fe}_2\text{O}_5$ during photodegradation of methyl orange. *Materials Science and Engineering: B* 2006;132(3) 311-314.
- [621] Mizusaki J, Okayasu M, Yamauchi S, Fueki K. Nonstoichiometry and phase relationship of the $\text{SrFeO}_{2.5}\text{SrFeO}_3$ system at high temperature. *Journal of Solid State Chemistry* 1992;99(1) 166-172.

- [622] Auckett JE, Studer AJ, Sharma N, Ling ChD. Floating-zone growth of brownmillerite $\text{Sr}_2\text{Fe}_2\text{O}_5$ and the observation of a chain-ordered superstructure by single-crystal neutron diffraction. *Solid State Ionics* 2012;225(4) 432-436.
- [623] Kendall KR, Navas C, Thomas JK, zurLoye HC. Structural and Magnetic Studies of $\text{Bi}_2\text{Fe}_{4-x}\text{Al}_x\text{O}_9$. *Solid State Ionics* 1995;82 215-223.
- [624] Casey PS, Barker D, Hayward MA. Charge and structural ordering in the brownmillerite phases: $\text{La}_{1-x}\text{Sr}_x\text{MnO}_{2.5}$ ($0.2 < x < 0.4$). *Journal of Solid State Chemistry* 2006;179(5) 1375-1382.
- [625] Greaves C, Jacobson AJ, Tofield BC, Fender BEF. A powder neutron diffraction investigation of the nuclear and magnetic structure of $\text{Sr}_2\text{Fe}_2\text{O}_5$. *Acta Crystallographica B* 1975;31 641-646.
- [626] Schmidt M, Campbell SJ. Crystal and Magnetic Structures of $\text{Sr}_2\text{Fe}_2\text{O}_5$ at Elevated Temperature. *Journal of Solid State Chemistry* 156 (2001) 292-304.
- [627] D'Hondt H, Abakumov AM, Hadermann J, Kalyuzhnaya AS, Rozova MG, Antipov EV, Van Tendeloo G. Tetrahedral Chain Order in the $\text{Sr}_2\text{Fe}_2\text{O}_5$ Brownmillerite. *Chemistry of Materials* 2008;20 7188-7194.
- [628] Mahboub MS, Zeroual S, Boudjada A. Synthesis of homogeneous $\text{Ca}_{0.5}\text{Sr}_{0.5}\text{FeO}_{2.5+\delta}$ compound using a mirror furnace method. *Materials Research Bulletin* 2012;47(2) 370-374.
- [629] Prado F, Grunbaum N, Caneiro A, Manthiram A. Effect of La^{3+} doping on the perovskite-to-brownmillerite transformation in $\text{Sr}_{1-x}\text{La}_x\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ ($0 \leq x \leq 0.4$). *Solid State Ionics* 167(2004) 147-154.
- [630] Andreas Heyden, Shuguo Ma, Fanglin Chen. Synthesis and characterization of Mo-doped $\text{SrFeO}_{3-\delta}$ as cathode materials for solid oxide fuel cells. *Journal of Power Sources* 2012;202 63-69.
- [631] Roth G, Adelman P, Knitter R, Massing S, Wolf Th. The crystal structure of RESrGaCuO_5 (RE: La, Pr, Nd), a gallate-cuprate with strong structural similarities to superconducting cuprates. *Journal of Solid State Chemistry* 1992;99 376-387.
- [632] Hadermann J, van Tendeloo G, Abakumov AM, Pavlyuk BPh, Rozova M, Antipov EV. Structural transformation in fluorinated LaACuGaO_5 (A = Ca, Sr) brownmillerites. *International Journal of Inorganic Materials* 2000;24 493-502.
- [633] Luo K, Hayward MA. The synthesis and characterisation of $\text{LaCa}_2\text{Fe}_2\text{GaO}_8$. *Journal of Solid State Chemistry* 2013;198 203-209.
- [634] Wright AJ, Palmer HM, Anderson PA, Greaves C. Synthesis and structure of $\text{Sr}_2\text{MnGaO}_5$, a new layered manganese oxide. *Journal Of Materials Chemistry* 2001;11(5) 1324-1326.
- [635] Abakumov AM, Rozova MG, Ph Pavlyuk B, Lobanov MV, Antipov EV, Lebedev OI, van Tendeloo G, Ignatchik OL, Ovtchenkov EA, Koksharov YA, Vasil'ev AN. Syn-

- thesis, Crystal Structure, and Magnetic Properties of a Novel Layered Manganese Oxide $\text{Sr}_2\text{MnGaO}_{5+\delta}$. *Journal of Solid State Chemistry* 2001;160 353-361.
- [636] Abakumov AM, Alekseeva AM, Rozova MG, Antipov EV, Lebedev OI, Van Tendeloo G. Ordering of tetrahedral chains in the $\text{Sr}_2\text{MnGaO}_5$ brownmillerite. *Journal of Solid State Chemistry* 2003;174(2) 319-328.
- [637] Antipov EV, Lebedev OI, Van Tendeloo G. Synthesis and structure of $\text{Sr}_2\text{MnGaO}_{5+\delta}$ brownmillerites with variable oxygen content. *Solid State Sciences* 2003;5(6) 871-882.
- [638] D'Hondt H, Hadermann J, Abakumov AM, Kalyuzhnaya AS, Rozova MG, Tsirlin AA, Nath R, Tan H, Verbeeck J, Antipov EV, Tendeloo GV. Synthesis, crystal structure and magnetic properties of the $\text{Sr}_2\text{Al}_{0.78}\text{Mn}_{1.22}\text{O}_{5.2}$ anion-deficient layered perovskite. *Journal of Solid State Chemistry* 2009;182(2) 356-363.
- [639] Zhao YM, Zhou PF. Metal-insulator transition in helical $\text{SrFeO}_{3-\delta}$ antiferromagnet. *Journal of Magnetism and Magnetic Materials* 2004;281(2-3)214-220.
- [640] Augustin CO, Berchmans LJ, Selvan RK. Structural, electrical and electrochemical properties of co-precipitated $\text{SrFeO}_{3-\delta}$. *Materials Letters* 2004;58(7-8) 1260-1266.
- [641] Leonidov IA, Patrakeev MV, Bahteeva JA, Mitberg EB, Kozhevnikov VL, Colomban P, Poeppelmeier KR. High-temperature phase equilibria in the oxide systems $\text{SrFe}_{1-x}\text{Ga}_x\text{O}_{2.5}$ - $\text{SrFe}_{1-x}\text{Ga}_x\text{O}_3$ ($x = 0, 0.1, 0.2$). *Journal of Solid State Chemistry* 2006;179(4) 1093-1099.
- [642] Shaula AL, Pivak YV, Waerenborgh JC, Gaczyński P, Yaremchenko AA, Kharton VV. Ionic conductivity of brownmillerite-type calcium ferrite under oxidizing conditions. *Solid State Ionics* 2006;177(33-34) 2923-2930.
- [643] Zhang GB, Smyth DM. Protonic conduction in $\text{Ba}_2\text{In}_2\text{O}_5$. *Solid State Ionics* 1995;82(3-4)153-160.
- [644] Schober T, Friedrich J, Krug F. Phase transition in the oxygen and proton conductor $\text{Ba}_2\text{In}_2\text{O}_5$ in humid atmospheres below 300°C. *Solid State Ionics* 1997;999-13.
- [645] Schober T, Friedrich J. The oxygen and proton conductor $\text{Ba}_2\text{In}_2\text{O}_5$: Thermogravimetry of proton uptake. *Solid State Ionics* 1998;113-115 369-375.
- [646] Fischer W, Reckand G, Schober T. Structural transformation of the oxygen and proton conductor $\text{Ba}_2\text{In}_2\text{O}_5$ in humid air: an in-situ X-ray powder diffraction study. *Solid State Ionics* 1999;116(3-4) 211-215.
- [647] Omata T, Kita M, Goto Y, Okura T, Otsuka-Yao-Matsuo S. Formation and Thermal Stability of Hydrate-Like Compounds of $\text{Ba}_2(\text{In}_{1-x}\text{M}^{\text{III}})_2\text{O}_5 \cdot n\text{H}_2\text{O}$ ($\text{M}^{\text{III}} = \text{Ga}, \text{Sc}, \text{Lu}, \text{and Y}$). *Journal of The Electrochemical Society* 2005;152(6) A1068-1072.
- [648] Omata T, Fuke T, Otsuka-Yao-Matsuo S. Hydration behavior of $\text{Ba}_2\text{Sc}_2\text{O}_5$ with an oxygen-deficient perovskite structure. *Solid State Ionics* 2006;177(26-32) 2447-2451.

- [649] Muñoz R, Masó N, Julián B, Márquez F, Beltrán H, Escribano P, Cordoncillo E. Environmental study of Cr_2O_3 - Al_2O_3 green ceramic pigment synthesis. *Journal of the European Ceramic Society* 2004;24(7) 2087-2094.
- [650] Shibata K, Yoshinaka M, Hirota K, Yamaguchi O. Fabrication and mechanical properties of Cr_2O_3 solid solution ceramics in the system Cr_2O_3 - Al_2O_3 . *Materials Research Bulletin* 1997;32(5) 627-632.
- [651] Cho S.-A, Arenas FJ, Ochoa J. Densification and hardness of Al_2O_3 - Cr_2O_3 system with and without Ti addition. *Ceramics International* 1990;16(5) 301-309.
- [652] Riu D.-H, Kong Y.-M, Kim H.-E. Effect of Cr_2O_3 addition on microstructural evolution and mechanical properties of Al_2O_3 . *Journal of the European Ceramic Society* 2000;20(10) 1475-1481.
- [653] Hirata T, Akiyama K, Yamamoto H. Sintering behavior of Cr_2O_3 - Al_2O_3 ceramics. *Journal of the European Ceramic Society* 2000;20(2) 195-199.
- [654] Kitaoka Y, Nakamura K, Akiyama T, Ito T. Structural stability and electronic properties in Al_2O_3 - Cr_2O_3 mixed crystal. *Journal of Crystal Growth* 2013;362(1) 42-44.
- [655] Mitra NK, Maitra S, Gnanabharathi D, Parya TK, Dey R. Effect of Cr_2O_3 on the sintering of aluminosilicate precursor leading to mullite formation. *Ceramics International* 2001;27(3) 277-282.
- [656] Sarkar R, Das SK, Banerjee G. Effect of addition of Cr_2O_3 on the properties of reaction sintered MgO - Al_2O_3 spinels. *Journal of the European Ceramic Society* 2002;22(8) 1243-1250.
- [657] Pakhomov NA, Kashkin VN, Nemykina EI, Molchanov VV, Nadtochiy VI, Noskov AS. Dehydrogenation of C3-C4 paraffins on $\text{Cr}_2\text{O}_3/\text{Al}_2\text{O}_3$ catalysts in fluidized and fixed bed reactors. *Chemical Engineering Journal* 2009;154(1-3) 185-188.
- [658] Gascón J, Téllez C, Herguido J, Menéndez M. Propane dehydrogenation over a $\text{Cr}_2\text{O}_3/\text{Al}_2\text{O}_3$ catalyst: transient kinetic modeling of propene and coke formation. *Applied Catalysis A: General* 2003;248(1-2) 105-116.
- [659] Shee D, Sayari A. Light alkane dehydrogenation over mesoporous $\text{Cr}_2\text{O}_3/\text{Al}_2\text{O}_3$ catalysts. *Applied Catalysis A: General* 2010;389(1-2) 155-164.
- [660] Tang Y, Elzinga EJ, Lee YJ, Reeder RJ. Coprecipitation of chromate with calcite: Batch experiments and X-ray absorption spectroscopy. *Geochimica et Cosmochimica Acta* 2007;71(6) 1480-1493.
- [661] Areán CO, Carbonell CM, Platero EE, Macía EM, Zecchina A, Geobaldo F. Thermolysis of mixed alums: a route to mesoporous chromia-alumina. *Materials Chemistry and Physics* 1993;34(3-4) 214-218.
- [662] Peters D, Hummel FA. Phase studies in the systems CaO - Al_2O_3 - CaCrO_4 and SrO - Al_2O_3 - SrCrO_4 . *Cement and Concrete Research* 1979;9(2) 259-268.

- [663] Chang Y.-L, Hsiang H.-I, Liang M.-T. Characterizations of Eu, Dy co-doped SrAl_2O_4 phosphors prepared by the solid-state reaction with B_2O_3 addition. *Journal of Alloys and Compounds* 2008;461(1-2) 598-603.
- [664] Neumair SC, Kaindl R, Huppertz H. The new high-pressure borate $\text{Co}_7\text{B}_{24}\text{O}_{42}(\text{OH})_2 \cdot 2 \text{H}_2\text{O}$ - Formation of edge-sharing BO_4 tetrahedra in a hydrated borate. *Journal of Solid State Chemistry* 2012;185 1-9.
- [665] Goh K.-H, Lim T.-T, Dong Z. Application of layered double hydroxides for removal of oxyanions: A review. *Water Research* 2008;42(6-7) 1343-1368.
- [666] Liang X, Zang Y, Xu Y, Tan X, Hou W, Wang L, Sun Y. Sorption of metal cations on layered double hydroxides. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 2013;433 122-131.
- [667] Yang K, Yan L.-g, Yang Y.-m, Yu Sh.-j, Shan R.-r, Yu H.-q, Zhu B.-c, Du B. Adsorptive removal of phosphate by Mg–Al and Zn–Al layered double hydroxides: Kinetics, isotherms and mechanisms. *Separation and Purification Technology* 2014;12436-42.
- [668] Heredia AC, Oliva MI, Agú U, Zandalazini CI, Marchetti SG, Herrero ER, Crivello ME. Synthesis, characterization and magnetic behavior of Mg–Fe–Al mixed oxides based on layered double hydroxide. *Journal of Magnetism and Magnetic Materials* 2013;342 38-46.
- [669] Cui G, Evans DG, Li D. Synthesis and UV absorption properties of 5, 5'-thiodisalicylic acid intercalated Zn-Al layered double hydroxides. *Polymer Degradation and Stability* 2010;95(10) 2082-2087.
- [670] Pérez MR, Barriga C, Fernández JM, Rives V, Ulibarri MA. Synthesis of Cd/(Al+Fe) layered double hydroxides and characterization of the calcination products. *Journal of Solid State Chemistry* 2007;180(12) 3434-3442.
- [671] Mishra G, Dash B, Pandey S, Mohanty PP. Antibacterial actions of silver nanoparticles incorporated Zn-Al layered double hydroxide and its spinel. *Journal of Environmental Chemical Engineering* 2013;1(4) 1124-1130.
- [672] Zhang X, Li Sh. Mechanochemical approach for synthesis of layered double hydroxides. *Applied Surface Science* 2013;274 158-163.
- [673] Wittmann FH. Creep and shrinkage mechanisms. Part II in creep and shrinkage. In: *Concrete structures*; Ed. Bazant ZP, Wittmann FH. John Wiley & Sons; 1982.
- [674] Zhang T, Gao P, Luo R, Guo Y, Wei J, Yu Q. Measurement of chemical shrinkage of cement paste: Comparison study of ASTM C 1608 and an improved method. *Construction and Building Materials* 2013;48 662-669.
- [675] Bouasker M, Mounanga P, Turcry P, Loukili A, Khelidj A. Chemical shrinkage of cement pastes and mortars at very early age: Effect of limestone filler and granular inclusions. *Cement and Concrete Composites* 2008;30(1) 13-22.

- [676] Barcelo L, Moranville M, Clavaud B. Autogenous shrinkage of concrete: a balance between autogenous swelling and self-desiccation. *Cement and Concrete Research* 2005;35(1) 177-183.
- [677] Tazawa E-i, Miyazawa Sh. Influence of cement and admixture on autogenous shrinkage of cement paste. *Cement and Concrete Research* 1995;25(2) 281-287.
- [678] ASTM C 1608. Standard test method for chemical shrinkage of hydraulic cement paste. American society for testing and materials. West Conshohocken (PA): ASTM International; 2007.
- [679] Li Y, Bao J, Guo Y. The relationship between autogenous shrinkage and pore structure of cement paste with mineral admixtures. *Construction and Building Materials* 2010;24(10) 1855-1860.
- [680] Geiker M, Knudsen T. Chemical shrinkage of portland cement pastes. *Cement and Concrete Research* 1982;12(5) 603-610.
- [681] Tongaroonsri S, Tangtermsirikul S. Effect of mineral admixtures and curing periods on shrinkage and cracking age under restrained condition. *Construction and Building Materials* 2009;23(2) 1050-1056.
- [682] Bissonnette B, Pierre P, Pigeon M. Influence of key parameters on drying shrinkage of cementitious materials. *Cement and Concrete Research* 1999;29(10) 1655-1662.
- [683] Mo L, Deng M, Tang M. Effects of calcination condition on expansion property of MgO-type expansive agent used in cement-based materials. *Cement and Concrete Research* 2010;40(3) 437-446.
- [684] Mo L, Deng M, Wang A. Effects of MgO-based expansive additive on compensating the shrinkage of cement paste under non-wet curing conditions. *Cement and Concrete Composites* 2012;34(3) 377-383.
- [685] Zheng L, Xuehua C, Mingshu T. Hydration and setting time of MgO-type expansive cement Original. *Cement and Concrete Research* 1992;22(1) 1-5.
- [686] Zheng L, Xuehua C, Mingshu T. MgO-type delayed expansive cement. *Cement and Concrete Research* 1991;21(6) 1049-1057.
- [687] Gao P, Lu X, Geng F, Li X, Hou J, Lin H, Shi N. Production of MgO-type expansive agent in dam concrete by use of industrial by-products. *Building and Environment* 2008;43(4) 453-457.
- [688] Appah D, Reichetseder P. Practical improvements in CaO-swelling cements. *Journal of Petroleum Science and Engineering* 2002;36(1-2) 61-70.
- [689] Opravil T, Ptáček P, Šoukal F, Havlica J, Brandštetr J. The synthesis and characterization of an expansive admixture for M-type cements I. The influence of free CaO to the formation of ettringite. *Journal of Thermal Analysis and Calorimetry* 2013;111(1) 517-526.

- [690] Mo L, Deng M, Tang M, Al-Tabbaa A. MgO expansive cement and concrete in China: Past, present and future. *Cement and Concrete Research* 2014;57 1-12.
- [691] Pavoine A, Brunetaud X, Divet L. The impact of cement parameters on Delayed Ettringite Formation. *Cement and Concrete Composites* 2012;34(4) 521-528.
- [692] ACI Committee 223: Expansive cement concretes - Present state of knowledge. *ACI Journal* (1970) 583-610.
- [693] Cohen MD. Theories of expansion in sulfoaluminate-type expansive cements: schools of thought. *Cements and Concrete Research* 1983;13 809-818.
- [694] Kasselouri V, Tsakiridis P, Malami Ch, Georgali B, Alexandridou C. A study on the hydration products of a non-expansive sulfoaluminate cement. *Cement and Concrete Research* 1995;25 1726-1736.
- [695] Lu Y, Su M, Wang Y. Microstructural study of the interfacial zone between expansive sulphoaluminate cement pastes and limestone aggregates. *Cement and Concrete Research* 1996;26 805-812.
- [696] Havlica J, Sahu S. Formation and expansion of ettringite crystals. *Cement and Concrete Research* 1992;22(4) 671-677.
- [697] Nagataki S, Gomi H. Expansive admixtures (mainly ettringite). *Cement and Concrete Composites* 1998;20(2-3) 163-170.
- [698] Brown PW, LaCroix P. The kinetics of ettringite formation. *Cement and Concrete Research* 1989;19 879-884.
- [699] Evju C, Hansen S. The kinetics of ettringite formation and dilatation in a blended cement with β -hemihydrate and anhydrite as calcium sulfate. *Cement and Concrete Research* 2005;35 2310-2321.
- [700] Palou M, Majling J, Dovál M, Kozanková J, Mojmudar SCh. Formation and stability of crystallohydrates in the non-equilibrium system during hydration of SAB cements. *Ceramics – Silikáty* 2005;49 230-236.
- [701] Gabrišová A, Havlica J, Sahu S. Stability of calcium sulphoaluminate hydrates in water solutions with various pH values *Cement and Concrete Research* 1991;21(1) 1023-1027.
- [702] Palou MT, Majling J. Effect of sulphate, calcium and aluminium ions upon the hydration of sulphoaluminate belite cement. *Journal of Thermal Analysis* 1996;46 549-556.
- [703] Palou MT, Majling J. Hydration in the system C_4AS_3 -CSH₂-CH-H. *Journal of Thermal Analysis* 1996;46 557-563.
- [704] Gaines RV, Skinner HCW, Foord EF, Mason B, Rosenzweig A. *Dana's New Mineralogy*; 8th ed.; John Wiley; New York; 1998.

- [705] Zhou Q, Lachowski EE, Glasser FP. Metaettringite, a decomposition product of ettringite. *Cement and Concrete Research* 2004;34(4) 703-710.
- [706] Gougar MLD, Scheetz BE, Roy DM. Ettringite and C-S-H Portland cement phases for waste ion immobilization: A review. *Waste Management* 1996;16(4) 295-303.
- [707] Frost RL, López A, Xi Y, Scholz R, da Costa GM, Lima RMF, Granja A. The spectroscopic characterization of the sulphate mineral ettringite from Kuruman manganese deposits, South Africa. *Vibrational Spectroscopy* 2013;68 266-271.
- [708] Möschner G, Lothenbach B, Winnefeld F, Ulrich A, Figi R, Kretzschmar R. Solid solution between Al-ettringite and Fe-ettringite ($\text{Ca}_6[\text{Al}_{1-x}\text{Fe}_x(\text{OH})_6]_2(\text{SO}_4)_3 \cdot 26\text{H}_2\text{O}$). *Cement and Concrete Research* 2009;39(6) 482-489.
- [709] Clark SM, Colas B, Kunz M, Speziale S, Monteiro PJM. Effect of pressure on the crystal structure of ettringite. *Cement and Concrete Research* 2008;38(1) 19-26.
- [710] Kumarathasan P, McCarthy GJ, Hassett DJ, Pflughoeft-Hasset DF. Oxyanion substituted ettringites: synthesis and characterization; and their potential role in immobilization of As, B, Cr, Se and V. *Materials Research Society Symposium Proceedings* 1990;178 83-104.
- [711] Poellmann H, St. Auer H-J, Wenda KR. Solid solution of ettringites: Part II: Incorporation of $\text{B}(\text{OH})_4^-$ and CrO_4^{2-} in $3\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot 3\text{CaSO}_4 \cdot 32\text{H}_2\text{O}$. *Cement and Concrete Research* 1993;23(2) 422-430.
- [712] Baur I, Johnson CA. The solubility of selenate-AFt ($3\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot 3\text{CaSeO}_4 \cdot 37.5\text{H}_2\text{O}$) and selenate-AFm ($3\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot \text{CaSeO}_4 \cdot x\text{H}_2\text{O}$). *Cement and Concrete Research* 2003;33(11) 1741-1748.
- [713] Kadiyski M, Armbruster T, Günther D, Reusser E, Peretti A. Johachidolite, $\text{CaAl}[\text{B}_3\text{O}_7]$, a mineralogical and structural peculiarity. *European Journal of Mineralogy* 2008, 20, 965-973.
- [714] Champenois J.-B, Mesbah A, Coumes CCD, Renaudin G, Leroux F, Mercier C, Revel B, Damidot D. Crystal structures of Boro-AFm and sBoro-AFt phases. *Cement and Concrete Research* 2012;42(10) 1362-1370.
- [715] Perkins RB, Palmer CD. Solubility of $\text{Ca}_6[\text{Al}(\text{OH})_6]_2(\text{CrO}_4)_3 \cdot 26\text{H}_2\text{O}$, the chromate analog of ettringite at 5–75 °C. *Applied Geochemistry* 2000;15 1203-1218.
- [716] Sharp JH, Milestone NB, Hill J, Miller EW. Cementitious systems for encapsulation of intermediate level waste; in: *The 9th International Conference on Radioactive Waste Management and Environmental Remediation*; Oxford; UK; 2003.
- [717] Hassett DJ, McCarthy GJ, Kumarathasan P, Pflughoeft-Hassett D. Synthesis and characterization of selenate and sulfate-selenate ettringite structure phases. *Materials Research Bulletin* 1990;25(11) 1347-1354.

- [718] OECD, Nuclear Energy Agency. Chemical Thermodynamics Chemical Thermodynamics of Solid Solutions of Interest in Radioactive Waste Management. Chemical Thermodynamics. OECD Publishing; 2007. ISBN: 9789264033191.
- [719] Barnett SJ, Adam CD, Jackson ARW. An XRPD profile fitting investigation of the solid solution between ettringite, $\text{Ca}_6\text{Al}_2(\text{SO}_4)_3(\text{OH})_{12}\cdot 26\text{H}_2\text{O}$, and carbonate ettringite, $\text{Ca}_6\text{Al}_2(\text{CO}_3)_3(\text{OH})_{12}\cdot 26\text{H}_2\text{O}$. *Cement and Concrete Research* 2001;31(1) 13-17.
- [720] Hampson CJ, Bailey JE. On the structure of some precipitated calcium alumino-sulfate hydrates *Journal of Materials Science* 1982;17 3341-3346.
- [721] Damidot D, Glasser FP. Thermodynamic investigation of the $\text{CaO-Al}_2\text{O}_3\text{-CaSO}_4\text{-H}_2\text{O}$ system at 25°C and the influence of Na_2O . *Cement and Concrete Research* 1993;23(1) 221-238.
- [722] Damidot D, Glasser FP. Thermodynamic investigation of the $\text{CaO-Al}_2\text{O}_3\text{-CaSO}_4\text{-H}_2\text{O}$ system at 50°C and 85°C. *Cement and Concrete Research* 1992;22(6) 1179-1191.
- [723] Damidot D, Glasser FP. Thermodynamic investigation of the $\text{CaO-Al}_2\text{O}_3\text{-CaSO}_4\text{-K}_2\text{O-H}_2\text{O}$ system at 25°C. *Cement and Concrete Research* 1993;23(5) 1195-1204.
- [724] Pajares I, Martínez-Ramírez S, Blanco-Varela MT. Evolution of ettringite in presence of carbonate, and silicate ions. *Cement and Concrete Composites* 2003;25(8) 861-865.
- [725] Lachowski EE, Barnett SJ, Macphee DE. Transmission electron optical study of ettringite and thaumasite. *Cement and Concrete Composites* 2003;25(8) 819-822.
- [726] Ramezaniapour AM, Hooton RD. Thaumasite sulfate attack in Portland and Portland-limestone cement mortars exposed to sulfate solution. *Construction and Building Materials* 2013;40 162-173.
- [727] Skaropoulou A, Kakali G, Tsivilis S. Thaumasite form of sulfate attack in limestone cement concrete: The effect of cement composition, sand type and exposure temperature. *Construction and Building Materials* 2012;36 527-533.
- [728] Schmidt T, Lothenbach B, Romer M, Scrivener K, Rentsch D, Figi R. A thermodynamic and experimental study of the conditions of thaumasite formation. *Cement and Concrete Research* 2008;38(3) 337-349.
- [729] Thomas MDA, Rogers CA, Bleszynski RF. Occurrences of thaumasite in laboratory and field concrete. *Cement and Concrete Composites* 2003;25(8) 1045-1050.
- [730] Brown PW. Thaumasite formation and other forms of sulfate attack. *Cement and Concrete Composites* 2002;24(3-4) 301-303.
- [731] Carlson ET, Berman HA. Some observation on the calcium aluminate carbonate hydrates. *Journal of Research, National Bureau of Standards* 1960;64A(4) 333-341.

- [732] Chrysochoou M, Dermatas D. Evaluation of ettringite and hydrocalumite formation for heavy metal immobilization: Literature review and experimental study. *Journal of Hazardous Materials* 2006;136(1) 20-33.
- [733] Hall C, Barnes P, Billimore AD, Jupe AC, Turrillas X. Thermal decomposition of ettringite $\text{Ca}_6[\text{Al}(\text{OH})_6]_2(\text{SO}_4)_3 \cdot 26\text{H}_2\text{O}$. *Journal of the Chemical Society, Faraday Transactions* 1996;92 2125-2129.
- [734] Vladu CM, Hall Ch, Maitland GC. Flow properties of freshly prepared ettringite suspensions in water at 25 °C. *Journal of Colloid and Interface Science* 2006;294(2) 466-472.
- [735] Álvarez-Ayuso E, Nugteren HW. Synthesis of ettringite: a way to deal with the acid wastewaters of aluminium anodising industry. *Water Research* 2005;39(1) 65-72.
- [736] Perkins RB, Palmer CD. Solubility of chromate hydrocalumite ($3\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot \text{Ca} \cdot \text{CrO}_4 \cdot n\text{H}_2\text{O}$) 5-75°C. *Cement and Concrete Research* 2001;31(7) 983-992.
- [737] Bothe JV Jr, Brown PW. Phase formation in the system $\text{CaO}-\text{Al}_2\text{O}_3-\text{B}_2\text{O}_3-\text{H}_2\text{O}$ at $23 \pm 1^\circ\text{C}$. *Journal of Hazardous Materials* 1998;63(2-3) 199-210.
- [738] Taylor HFW, Famy C, Scrivener KL. Delayed ettringite formation. *Cement and Concrete Research* 2001;31(5) 683-693.
- [739] Collepardi M. A state-of-the-art review on delayed ettringite attack on concrete. *Cement and Concrete Composites* 2003;25(4-5) 401-407.
- [740] Diamond S. Delayed ettringite formation - Processes and problems. *Cement and Concrete Composites* 1996;18(3) 205-215.
- [741] Odler I. Ettringite nomenclature. *Cement and Concrete Research* 1997;27(3) 473-474.
- [742] Ouhadi VR, Yong RN. Ettringite formation and behaviour in clayey soils. *Applied Clay Science* 2008;42(1-2) 258-265.
- [743] Aldaood A, Bouasker M, Al-Mukhtar M. Geotechnical properties of lime-treated gypseous soils. *Applied Clay Science* 2014;88-89 39-48.
- [744] Vlachou P.-V, Piau J.-M. Physicochemical study of the hydration process of an oil well cement slurry before setting. *Cement and Concrete Research* 1999;29(1) 27-36.
- [745] García-Maté M, De la Torre AG, León-Reina L, Aranda MAG, Santacruz I. Hydration studies of calcium sulfoaluminate cements blended with fly ash. *Cement and Concrete Research* 2013;54 12-20.
- [746] Narayanan PS, Lakshmanan BR. Infrared and raman spectra of witherite (BaCO_3) and strontianite (SrCO_3). *Journal of the Indian Institute of Science* 1957;40(1) 1-12.
- [747] Pasierb P, Komornicki S, Rokita M, Rekas M. Structural properties of $\text{Li}_2\text{CO}_3-\text{BaCO}_3$ system derived from IR and Raman spectroscopy. *Journal of Molecular Structure* 2001;596 151-156.

- [748] Turianicová E, Obut A, Zorkovská A, Baláž P, Matik M, Briančin J. The effects of LiOH and NaOH on the carbonation of SrSO_4 by dry high-energy milling. *Minerals Engineering* 2013;49 98-102.
- [749] Tang T.-P, Lee Ch.-M, Yen F.-Ch. The photoluminescence of $\text{SrAl}_2\text{O}_4\text{:Sm}$ phosphors. *Ceramics International* 2006;32(6) 665-671.
- [750] Derjaguin B, Landau L. Theory of the stability of strongly charged lyophobic sols and of the adhesion of strongly charged particles in solutions of electrolytes. *Acta Physico Chemica URSS* 1941;14 633-662.
- [751] Pechini MP. US Patent No. 3330697; 1967.
- [752] Zaki T, Kabel KI, Hassan H. Preparation of high pure $\alpha\text{-Al}_2\text{O}_3$ nanoparticles at low temperatures using Pechini method. *Ceramics International* 2012;38(3) 2021-2026.
- [753] Escribano P, Marchal M, Sanjuán ML, Alonso-Gutiérrez P, Julián B, Cordoncillo E. Low-temperature synthesis of SrAl_2O_4 by a modified sol-gel route: XRD and Raman characterization. *Journal of Solid State Chemistry* 2005;178(6) 1978-1987.
- [754] Xu Y, Peng W, Wang Sh, Xiang X, Lu P. Synthesis of SrAl_2O_4 and $\text{SrAl}_{12}\text{O}_{19}$ via ethylenediaminetetraacetic acid precursor. *Materials Chemistry and Physics* 2006;98(1) 51-54.
- [755] Peng T, Huajun L, Yang H, Yan Ch. Synthesis of $\text{SrAl}_2\text{O}_4\text{:Eu, Dy}$ phosphor nanometer powders by sol-gel processes and its optical properties. *Materials Chemistry and Physics* 2004;85 68-72.
- [756] Xiang Ying Chen, Zhao Li, Shi Ping Bao, Ping Ting Ji. Porous $\text{MAl}_2\text{O}_4\text{:Eu}^{2+}$ (Eu^{3+}), Dy^{3+} (M=Sr, Ca, Ba) phosphors prepared by Pechini-type sol-gel method: The effects of solvents. *Optical Materials* 34 (2011) 48-55.
- [757] Qiu X, Xu Y, Qiao X. Synthesis of SrAl_2O_4 from a mixed-metal citrate precursors. *Materials Letters* 2007;61 2731-2734.
- [758] Misevicius M, Scit O, Grigoraviciute-Puroniene I, Degutis G, Bogdanoviciene I, Karėiva A. Sol-gel synthesis and investigation of un-doped and Ce-doped strontium aluminates. *Ceramics International* 2012;385915-5924.
- [759] Lu Y, Li Y, Xiong Y, Wang D, Yin Q. $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}$, Dy^{3+} phosphors derived from a new sol-gel route. *Microelectronics Journal* 2004;35 379-382.
- [760] Chen I.-Ch, Chen K.-K, Chen H.-S, Du J.-k, Lin T.-J, Lin S.-Sh, Chen T.-M, Shieh T.-Y. Investigation into thermoluminescence and afterglow characterization of strontium aluminates with boron-modification and reductions via sol-gel route. *Journal of Rare Earths* 2012;30 972-978.
- [761] Tang Z, Zhang F, Zhang Z, Huang Ch, Lin Y. Luminescent properties of $\text{SrAl}_2\text{O}_4\text{:Eu, Dy}$ material prepared by the gel method. *Journal of the European Ceramics Society* 2000;20 2129-2132.

- [762] Luo X, Cao W, Xiao Z. Investigation on the distribution of rare earth ions in strontium aluminate phosphors. *Journal of Alloys and Compounds* 2006;416(1-2) 250-255.
- [763] Yang P, Lü MK, Song ChF, Xu D, Yuan DR, Cao DX, Gu F. Effect of Cu^{2+} ions on the photoluminescence characteristics of Ce^{4+} -doped SrAl_2O_4 . *Optical Materials* 2002;20(2) 135-140.
- [764] Kovalevsky AV, Kharton VV, Snijkers FMM, Cooymans JFC, Luyten JJ, Marques FMB. Oxygen transport and stability of asymmetric $\text{SrFe}(\text{Al})\text{O}_{3-\delta}$ - SrAl_2O_4 composite membranes. *Journal of Membrane Science* 2007;301(1-2) 238-244.
- [765] Cheng Y, Zhao Y, Zhang Y, Cao X. Preparation of SrAl_2O_4 : Eu^{2+} , Dy^{3+} fibers by electrospinning combined with sol-gel process. *Journal of Colloid and Interface Science* 2010;344 321-326.
- [766] Chang Ch, Yuan Z, Mao D. Eu^{2+} activated long persistent strontium aluminate nano scaled phosphor prepared by precipitation method. *Journal of Alloys and Compounds* 2006;415(1-2) 220-224.
- [767] Azorin J. Preparation methods of thermoluminescent materials for dosimetric applications: An overview. *Applied Radiation and Isotopes* 2014;83(Part C) 187-191.
- [768] Xue Z, Deng S, Liu Y, Lei B, Xiao Y, Zheng M. Synthesis and luminescence properties of SrAl_2O_4 : Eu^{2+} , Dy^{3+} hollow microspheres via a solvothermal co-precipitation method. *Journal of Rare Earths* 2013;31(3) 241-246.
- [769] Xiao Q, Xiao L, Liu Y, Chen X, Li Y. Synthesis and luminescence properties of needle-like SrAl_2O_4 :Eu, Dy phosphor via a hydrothermal co-precipitation method. *Journal of Physics and Chemistry of Solids* 2010;71(7) 1026-1030.
- [770] Yu X, Zhou Ch, He X, Peng Z, Yang S.-P. The influence of some processing conditions on luminescence of SrAl_2O_4 : Eu^{2+} nanoparticles produced by combustion method. *Materials Letters* 2004;581087-1091.
- [771] Peng T, Yang H, Pu X, Hu B, Jiang Z, Yan Ch. Combustion synthesis and photoluminescence of SrAl_2O_4 : Eu, Dy phosphor nanoparticles. *Materials Letters* 2004;58 359-356.
- [772] Shafia E, Bodaghi M, Esposite S, Aghaei A. A critical role of pH in the combustion synthesis of nano-sized SrAl_2O_4 : Eu^{2+} , Dy^{3+} phosphor. *Ceramics International* 2014;40(3) 4697-4706.
- [773] Patil KC, Aruna ST, Mimani T. Combustion synthesis: an update. *Current Opinion in Solid State and Materials Science* 2002;6(6) 507-512.
- [774] Li X, Qu Y, Xie X, Wang Z, Li R. Preparation of SrAl_2O_4 : Eu_{2+} , Dy_{3+} nanometer phosphors by detonation method. *Materials Letters* 2006;60(29-30) 3673-3677.

- [775] Li X, Qu Y, Sun G, Jiang D, Ouyang X. Study on the lattice distortion of the As-prepared nanosized TiO_2 particles via detonation method. *Journal of Physics and Chemistry of Solids* 2007;68(12) 2405-2410.
- [776] Aruna ST, Mukasyan AS. Combustion synthesis of nanomaterials. *Current Opinion in Solid State and Materials Science* 2008;12 44-50.
- [777] Xu R, Su Q. Chapter 2 - High-temperature Synthesis. *Modern Inorganic Synthetic Chemistry*; 2011.
- [778] Yeh CL, Chuang HC, Liu EW, Chang YC. Effects of dilution and preheating on SHS of vanadium nitride. *Ceramics International* 2005;31(1) 95-104.
- [779] Merzhanov AG. History and recent developments in SHS. *Ceramics International* 1995;21(5) 371-379.
- [780] Esharghawi A, Penot C, Nardou F. Elaboration of porous mullite-based materials via SHS reaction. *Ceramics International* 2010;36(1) 231-239.
- [781] Russias J, Cardinal S, Fontaine J, Fantozzi G, Esnouf C, Bienvenu K. Bulk titanium nitride material obtained from SHS starting powder: Densification, mechanical characterization and tribological approach. *International Journal of Refractory Metals and Hard Materials* 2005;23(4-6) 344-349.
- [782] Qian Q, Wang J, Gu Y, Li J, Zhao G, Zhang L, Pan X. Convenient synthesis of Fe-filled boron nitride nanotubes by SHS method. *Materials Letters* 2011;65(5) 866-868.
- [783] Cano IG, Rodríguez MA. Synthesis of β -Silicon nitride by SHS: fiber growth. *Scripta Materialia* 2004;50(3) 383-386.
- [784] Bermudo J, Osendi MI. Study of AlN and Si_3N_4 powders synthesized by SHS reactions. *Ceramics International* 1999;25(7) 607-612.
- [785] Pradeilles N, Record MC, Granier D, Marin-Ayral RM. Synthesis of β -SiAlON: A combined method using sol-gel and SHS processes. *Ceramics International* 2008;34(5) 1189-1194.
- [786] Lotfi B, Shipway PH, McCartney DG, Edris H. Abrasive wear behaviour of $\text{Ni}(\text{Cr})\text{-TiB}_2$ coatings deposited by HVOF spraying of SHS-derived cermet powders. *Wear* 2003;254(3-4) 340-349.
- [787] Contreras L, Turrillas X, Mas-Guindal MJ, Vaughan GBM, Kvick Å, Rodríguez MA. Synchrotron diffraction studies of TiC/FeTi cermets obtained by SHS. *Journal of Solid State Chemistry* 2005;178(5) 1595-1600.
- [788] Mas-Guindal MJ, Benko E, Rodríguez MA. Nanostructured metastable cermets of $\text{Ti-Al}_2\text{O}_3$ through activated SHS reaction. *Journal of Alloys and Compounds* 2008;454(1-2) 352-358.
- [789] Córdoba JM, Alcalá MD, Avilés MA, Sayagués MJ, Gotor FJ. New production of $\text{TiC}_x\text{N}_{1-x}$ -based cermets by one step mechanically induced self-sustaining reaction:

- Powder synthesis and pressureless sintering. *Journal of the European Ceramic Society* 2008;28(10) 2085-2098.
- [790] Sathaporn T, Niyomwas S. Synthesis and Characterization of MAl_2O_4 (M = Ba, Ca, Sr) Phosphor by Self-propagating High Temperature Synthesis. *Energy Procedia* 2011;9 410-417.
- [791] Zhang Q, Saito F. A review on mechanochemical syntheses of functional materials. *Advanced Powder Technology* 2012;23(5) 523-531.
- [792] Chen G, Niu D, Liu X. Preparation of SrAl_2O_4 from an oxide mixture via a high-energy ball milling. *Journal of Alloys and Compounds* 2005;399(1-2) 280-283.
- [793] Garcés RS, Torres JT, Valdés AF. Synthesis of SrAl_2O_4 and $\text{Sr}_3\text{Al}_2\text{O}_6$ at high temperature, starting from mechanically activated SrCO_3 and Al_2O_3 in blends of 3:1 molar ratio. *Ceramics International* 2012;38(2) 889-894.
- [794] Zollfrank C, Gruber S, Batentschuk M, Osvet A, Goetz-Neunhoffer F, Dittrich S, Grabow J, Kurland H.-D, Müller FA. Synthesis of Eu-doped SrAl_2O_4 nanophosphors by CO_2 laser vaporization. *Acta Materialia* 2013;61(19) 7133-7141.
- [795] Aroz R, Lennikov V, Cases R, Sanjuán ML, de la Fuente GF, Muñoz E. Laser synthesis and luminescence properties of $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}, \text{Dy}^{3+}$ phosphors. *Journal of the European Ceramic Society* 2012;32(16) 4363-4369.
- [796] Katsumata T, Nabae T, Sasajima K, Matsuzawa T. Growth and characteristics of long persistent SrAl_2O_4 - and CaAl_2O_4 -based phosphor crystals by a floating zone technique. *Journal of Crystal Growth* 1998;183(3) 361-365.
- [797] Jia W, Yuan H, Holmstrom S, Liu H, Yen WM. Photo-stimulated luminescence in $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}, \text{Dy}^{3+}$ single crystal fibers. *Journal of Luminescence* 1999;83-84 465-469.
- [798] Yen WM. Synthesis, Characterization and Applications of Shaped Single Crystals. *Physics of the Solid State* 1999;41(5) 693-696.
- [799] Nsimama PD, Ntwaeaborwa OM, Swart HC. The effect of different gas atmospheres on luminescent properties of pulsed laser ablated $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}, \text{Dy}^{3+}$ thin films. *Journal of Luminescence* 2011;131 119-125.
- [800] Swart HC, Ntwaeaborwa OM, Nsimama PD, Terblans JJ. Surface characterization and luminescent properties of $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}, \text{Dy}^{3+}$ nano thin films. *Physica B* 2012;407 1660-1663.
- [801] Nsimama PD, Ntwaeaborwa OM, Coetsee E, Swart HC. The influence of the number of pulses on the morphological and photoluminescence properties of $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}, \text{Dy}^{3+}$ thin films prepared by pulsed laser deposition. *Physica B* 2009;404 4489-4492.
- [802] Nsimama PD, Ntwaeaborwa OM, Coetsee E, Swart HC. The effect of substrate temperature on the structure, morphology and photoluminescence properties of pulsed laser deposited $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}, \text{Dy}^{3+}$ thin film. *Physica B* 2009;404 4436-4439.

- [803] Sato K, Komuro S, Morikawa T, Aizawa H, Katsumata T, Harako S, Zhao X. Long afterglow characteristics of thin film phosphor fabricate by laser ablation. *Journal of Crystal Growth* 2005;275 e1137-e1141.
- [804] Lee JS, Kim YJ. The deposition and the photoluminescence of $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}$ thin films. *Thin Solid Films* 2010;518 e149-e151.
- [805] Marla D, Bhandarkar UV, Joshi SS. Modeling nanosecond pulsed laser ablation: A focus on temperature dependence of material properties. *Manufacturing Letters* 2014;2(2) 13-16.
- [806] Suematsu H, Sengiku M, Kato K, Mitome M, Kimuto K, Matsui Y, Jiang W, Yatsui K. Photoluminescence properties of crystallized strontium aluminate thin films prepared by ion-beam evaporation. *Thin solid films* 2002;407(1-2) 136-138.
- [807] Ji Z, Tian S, Chen W, Kong Z, Wu J. Enhanced long lasting persistent luminescent $\text{SrAl}_2\text{O}_4\text{:Eu, Dy}$ ceramics prepared by electron beam bombardment. *Radiation Measurements* 2013;59 210-213.
- [808] Chang Ch, Mao D. Long lasting phosphorescence of $\text{Sr}_4\text{Al}_{14}\text{O}_{25}\text{:Eu}^{2+}, \text{Dy}^{3+}$ thin films by magnetron sputtering. *Thin Solid Films* 2004;46048-52.
- [809] Kato K, Tsutai I, Kamimura T, Kaneko F, Shinbo K, Ohta M, Kawakami T. Thermoluminescence properties of $\text{SrAl}_2\text{O}_4\text{:Eu}$ sputtered films with long phosphorescence. *Journal of Luminescence* 1999;82(3) 213-220.
- [810] Haranath D, Sharma P, Chander H, Ali A, Bhalla N, Halder SK. Role of boric acid in synthesis and tailoring the properties of calcium aluminate phosphor. *Materials Chemistry and Physics* 2007;101(1) 163-169.
- [811] Mothudi BM, Ntwaeaborwa OM, Botha JR, Swart HC. Photoluminescence and phosphorescence properties of $\text{MAl}_2\text{O}_4\text{:Eu}^{2+}, \text{Dy}^{3+}$ (M=Ca, Ba, Sr) phosphors prepared at an initiating combustion temperature of 500°C. *Physica B: Condensed Matter* 2009;404(22) 4440-4444.
- [812] Singh V, Natarajan V, Zhu J.-J. Luminescence and EPR investigations of Mn activated calcium aluminate prepared via combustion method. *Optical Materials* 2007;30(3) 468-472.
- [813] Zhao Ch, Chen D. Synthesis of $\text{CaAl}_2\text{O}_4\text{:Eu, Nd}$ long persistent phosphor by combustion processes and its optical properties. *Materials Letters* 2007;61(17) 3673-3675.
- [814] Sharma SK, Pitale SS, Malik MM, Qureshi MS, Dubey RN. Spectral and kinetic characterization of orange-red emitting $\text{Sr}_3\text{Al}_2\text{O}_6\text{:Eu}^{3+}/\text{Sm}^{3+}$ phosphor. *Journal of Alloys and Compounds* 2009;482(1-2) 468-475.
- [815] Kim SJ, Won HI, Hayk N, Won ChW, Jeon DY, Kirakosyan AG. Preparation and characterization of $\text{Sr}_4\text{Al}_2\text{O}_7\text{:Eu}^{3+}, \text{Eu}^{2+}$ phosphors. *Materials Science and Engineering: B* 2011;176(18) 1521-1525.

- [816] Yerpude AN, Dhoble SJ. Luminescence in trivalent rare earth activated $\text{Sr}_4\text{Al}_2\text{O}_7$ phosphor. *Optik - International Journal for Light and Electron Optics* 2013;124(18) 3567-3570.
- [817] Huang P, Zhang Q, Cui C.-e, Li J. Influence of excitation wavelengths on luminescent properties of $\text{Sr}_3\text{Al}_2\text{O}_6\text{:Eu}^{2+}$, Dy^{3+} phosphors prepared by sol-gel-combustion processing. *Optical Materials* 2011;33(8) 1252-1257.
- [818] Chen XY, Bao SP, Wu YCh. Controlled synthesis and luminescent properties of Eu^{2+} (Eu^{3+}), Dy^{3+} -doped $\text{Sr}_3\text{Al}_2\text{O}_6$ phosphors by hydrothermal treatment and postannealing approach. *Journal of Solid State Chemistry* 2010;183(9) 2004-2011.
- [819] Zhang P, Xu M.-x, Zheng Z.-t, Sun B, Zhang Y.-h. Microwave synthesis and characterization of new red long afterglow phosphor $\text{Sr}_3\text{Al}_2\text{O}_6\text{:Eu}$. *Transactions of Nonferrous Metals Society of China* 2006;16(s1) s423-s425.
- [820] Li G, Lai Y, Cui T, Yu H, Liu D, Gan S. Luminescence properties and charge compensation of $\text{Sr}_3\text{Al}_2\text{O}_6$ doped with Ce^{3+} and alkali metal ions. *Materials Chemistry and Physics* 2010;124(2-3) 1094-1099.
- [821] Feng W.-L. Preparation and luminescent properties of green $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}$ and blue $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}$, Gd^{3+} phosphors. *Materials Letters* 2013;110 91-93.
- [822] Wu ZC, Shi JX, Wang J, Wu H, SuQ, Gong ML. Synthesis and luminescent properties of $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}$ green-emitting phosphor for white LEDs. *Materials Letters* 2006;60(29-30) 3499-3501.
- [823] Ayvacıklı M, Ege A, Can N. Radioluminescence of $\text{SrAl}_2\text{O}_4\text{:Ln}^{3+}$ ($\text{Ln} = \text{Eu}, \text{Sm}, \text{Dy}$) phosphor ceramic. *Optical Materials* 2011;34(1) 138-142.
- [824] Shafia E, Bodaghi M, Tahriri M. The influence of some processing conditions on host crystal structure and phosphorescence properties of $\text{SrAl}_2\text{O}_4\text{:Eu}^{2+}$, Dy^{3+} nanoparticle pigments synthesized by combustion technique. *Current Applied Physics* 2010;10(2) 596-600.
- [825] Sharma SK, Pitale SS, Malik MM, Rao TKG, Chawla S, Qureshi MS, Dubey RN. Spectral and defect analysis of Cu-doped combustion synthesized new SrAl_4O_7 phosphor. *Journal of Luminescence* 2010;130(2) 240-248.
- [826] Singh V, Rao TKG, Zhu J.-J. Preparation, luminescence and defect studies of Eu^{2+} -activated strontium hexa-aluminate phosphor prepared via combustion method. *Journal of Solid State Chemistry* 2006;179(8) 2589-2594.
- [827] Blasse G. Energy transfer between inequivalent Eu^{2+} ions. *Journal of Solid State Chemistry* 1986;62(2) 207-211.
- [828] Lu Z, Weng L, Song S, Zhang P, Luo X. Hydrothermal synthesis, morphology and photoluminescence of hexagonal $\text{SrSiO}_3\text{:Eu}^{2+}$ micro-octahedrons and prism-like hollow microstructures. *Materials Chemistry and Physics* 2012;132(2-3) 800-807.

- [829] Cui Z, Ye R, Deng D, Hua Y, Zhao S, Jia G, Li Ch, Xu S. $\text{Eu}^{2+}/\text{Sm}^{3+}$ ions co-doped white light luminescence SrSiO_3 glass-ceramics phosphor for White LED. *Journal of Alloys and Compounds* 2011;509(8) 3553-3558.
- [830] Kuang J, Liu Y, Zhang J. White-light-emitting long-lasting phosphorescence in Dy^{3+} -doped SrSiO_3 . *Journal of Solid State Chemistry* 2006;179(1) 266-269.
- [831] Liu H, Wang Y, Yang J, Li L, Su W, Guan Z, Yu B. The structure and luminescence characteristics of $\text{SrSiO}_3:\text{Eu}^{3+}:\text{Bi}^{3+}$ synthesized at a high pressure and high temperature. *Journal of Alloys and Compounds* 1993;191(1) 1-4.
- [832] Tshabalala MA, Dejene FB, Pitale SS, Swart HC, Ntwaeaborwa OM. Generation of white-light from Dy^{3+} doped Sr_2SiO_4 phosphor. *Physica B: Condensed Matter* 2014;439 126-129.
- [833] Saradhi MP, Lakshminarasimhan N, Boudin S, Gupta KVK, Varadaraju UV, Raveau B. Enhanced luminescence of $\text{Sr}_2\text{SiO}_4:\text{Dy}^{3+}$ by sensitization ($\text{Ce}^{3+}/\text{Eu}^{2+}$) and fabrication of white light-emitting-diodes. *Materials Letters* 2014;117 302-304.
- [834] Gupta SK, Kumar M, Natarajan V, Godbole SV. Optical properties of sol-gel derived $\text{Sr}_2\text{SiO}_4:\text{Dy}^{3+}$ - Photo and thermally stimulated luminescence. *Optical Materials* 2013;35(12) 2320-2328.
- [835] Yang R.-Y, Chen H.-Y, Chang S.-J, Yang Y.-K. Effect of Eu^{3+} concentration on microstructure and photoluminescence of $\text{Sr}_2\text{SiO}_4:\text{Eu}^{3+}$ phosphors prepared by microwave assisted sintering. *Journal of Luminescence* 2012;132(3) 780-783.
- [836] Zhang L, Han P, Wang K, Lu Z, Wang L, Zhu Y, Zhang Q. Enhanced luminescence of $\text{Sr}_2\text{SiO}_4:\text{Dy}^{3+}$ by sensitization ($\text{Ce}^{3+}/\text{Bi}^{3+}$) and its composition-induced phase transition. *Journal of Alloys and Compounds* 2012;541 54-59.
- [837] Qiao Y, Zhang X, Ye X, Chen Y, Guo H. Photoluminescent properties of $\text{Sr}_2\text{SiO}_4:\text{Eu}^{3+}$ and $\text{Sr}_2\text{SiO}_4:\text{Eu}^{2+}$ phosphors prepared by solid-state reaction method. *Journal of Rare Earths* 2009;27(2) 323-326.
- [838] Dutczak D, Milbrat A, Katelnikovas A, Meijerink A, Ronda C, Jüstel T. Yellow persistent luminescence of $\text{Sr}_2\text{SiO}_4:\text{Eu}^{2+},\text{Dy}^{3+}$. *Journal of Luminescence* 2012;132(9) 2398-2403.
- [839] Qiu J, Kawasaki M, Tanaka K, Shimizu Y, Hirao K. Phenomenon and mechanism of long-lasting phosphorescence in Eu^{2+} -doped aluminosilicate glasses. *Journal of Physics and Chemistry of Solids* 1998;59(9) 1521-1525.
- [840] Guan Y, Wei Z, Huang Y, Maalej R, Seo HJ. 1.55 μm emission and upconversion luminescence of Er^{3+} -doped strontium borate glasses. *Ceramics International* 2013;39(6) 7023-7027.

- [841] Rajesh D, Ratnakaram YC, Seshadri M, Balakrishna A, Krishna TS. Structural and luminescence properties of Dy^{3+} ion in strontium lithium bismuth borate glasses. *Journal of Luminescence* 2012;132(3) 841-849.
- [842] Li Y, Niu P, Tang Ch, Hu L. Blue-excited luminescence of Eu-doped strontium borosilicate glasses. *Journal of Luminescence* 2008;128(2) 273-276.
- [843] Rajesh D, Balakrishna A, Ratnakaram YC. Luminescence, structural and dielectric properties of Sm^{3+} impurities in strontium lithium bismuth borate glasses. *Optical Materials* 2012;35(2) 108-116.
- [844] Jiang Ch, Huang Y, Park S, Jang K, Seo HJ. Luminescence and spectral hole burning of Sm^{2+} doped in $\text{Li}_2\text{O-SrO-B}_2\text{O}_3$ glass-ceramics. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 2009;72(2) 412-416.
- [845] Aleksandrovsky AS, Krylov AS, Malakhovskii AV, Potseluyko AM, Zaitsev AI, Zamkov AV. Europium doped strontium borate glasses and their optical properties. *Journal of Physics and Chemistry of Solids* 2005;66(1) 75-79.
- [846] Wu B, Qiu J, Wu E, Zeng H. Broadband near-infrared luminescence from transparent glass-ceramics containing Ni^{2+} -doped SrTiO_3 nanocrystals. *Optical Materials* 2013;35(5) 983-987.
- [847] Martín LL, Martín IR, Haro-González P. Transfer and backtransfer processes in Yb^{3+} - Er^{3+} codoped Strontium Barium Niobate glass-ceramics. *Journal of Luminescence* 2011;131(12) 2446-2450.
- [848] Jarý V, Boháček P, Mihóková E, Havlák L, Trunda B, Nikl M. Photoluminescence properties of non-stoichiometric strontium zirconate powder phosphor. *Optical Materials* 2013;35(5) 1019-1022.
- [849] Wang Zh, Zhang J, Zheng G, Peng X, Dai H. Violet-blue afterglow luminescence properties of non-doped SrZrO_3 material. *Journal of Luminescence* 2013;144 30-33.
- [850] Zhang A, Lü M, Zhou G, Zhou Y, Qiu Z, Ma Q. Synthesis, characterization and luminescence of Eu^{3+} -doped SrZrO_3 nanocrystals. *Journal of Alloys and Compounds* 2009;468(1-2) L17-L20.
- [851] Rétot H, Bessière A, Kahn-Harari A, Viana B. Synthesis and optical characterization of $\text{SrHfO}_3\text{:Ce}$ and $\text{SrZrO}_3\text{:Ce}$ nanoparticles. *Optical Materials* 2008;30(7) 1109-1114.
- [852] Nikl M, Bohacek P, Trunda B, Jary V, Fabeni P, Studnicka V, Kucerkova R, Beitlerova A. SrHfO_3 -based phosphors and scintillators. *Optical Materials* 2011;34(2) 433-438.
- [853] Yamamoto H, Mikami M, Shimomura Y, Oguri Y. Host-to-activator energy transfer in a new blue-emitting phosphor $\text{SrHfO}_3\text{:Tm}^{3+}$. *Journal of Luminescence* 2000;87-89 1079-1082.

- [854] Höllriegl V, München HZ. Strontium in the Environment and Possible Human Health Effects. Reference Module in Earth Systems and Environmental Sciences, from Encyclopedia of Environmental Health; 2011.
- [855] Wohl GR, Chettle DR, Pejović-Milić A, Druchok Ch, Webber CE, Adachi JD, Beattie KA. Accumulation of bone strontium measured by in vivo XRF in rats supplemented with strontium citrate and strontium ranelate. *Bone* 2013;52(1) 63-69.
- [856] Harrigan TP, Karih JA, O'Connor DO, Burke DW, Harris WH. A finite element study of the initiation of failure of fixation in cemented femoral total hip components. *Journal of Orthopaedic Research* 1992;10 134-144.
- [857] Wang JS, Franzen H, Toksvig-Larsen S, Lidgren L. Does vacuum mixing of bone cement affect heat generation? Analysis of four cement brands. *Journal of Applied Biomaterials* 1995;6 105-108.
- [858] Sudarsanan K, Young RA. Structure of strontium hydroxide phosphate, $\text{Sr}_5(\text{PO}_4)_3\text{OH}$. *Acta Crystallographica Section B* 1972;B28(12) 3668-3670.
- [859] Cox SC, Jamshidi P, Grover LM, Mallick KK. Preparation and characterisation of nanophase Sr, Mg, and Zn substituted hydroxyapatite by aqueous precipitation. *Materials Science and Engineering: C* 2014;35106-114.
- [860] Elliott JC. Structure and Chemistry of the Apatites and Other Calcium Orthophosphates; Amsterdam: Elsevier; 1994.
- [861] Bigi A, Boanini E, Capuccini Ch, Gazzano M. Strontium-substituted hydroxyapatite nanocrystals. *Inorganica Chimica Acta* 2007;360(3) 1009-1016.
- [862] Meunier PJ, Roux C, Seeman E, Ortolani S, Badurski J, Spector TD, Cannata J, Balogh A, Lemmel EM, Pors-Nielsen S, Rizzoli R, Genant HK, Rejnster JY. The effects of strontium ranelate on the risk of vertebral fracture in women with postmenopausal osteoporosis. *The New England Journal of Medicine* 2004;350(5) 459-468.
- [863] Zhaoyang Li, Ning Yuan, Raymond Wing Moon Lam, Zhenduo Cui, Xianjin Yang, Lu WW. Preclinical evaluation of strontium-containing bioactive bone cement. *Materials Science and Engineering: C* 2013;33(8) 5100-5104.
- [864] Li YW, Leong JCY, Lu WW, Luk KDK, Cheung KMC, Chiu KY, Chow SP. A novel injectable bioactive bone cement for spinal surgery: a developmental and preclinical study. *Journal of Biomedical Materials Research* 2000;52(1) 164-170.
- [865] Lu WW, Cheung KM, Li YW, Luk KDK, Holmes AD, Zhu QA, Leong JC. Bioactive bone cement as a principal fixture for spinal burst fracture: an in vitro biomechanical and morphologic study. *Spine* 2001;26 2684-2690.
- [866] Ni GX, Chiu KY, Lu WW, Wang Y, Zhang YG, Hao LB, Li ZY, Lam WM, Lu SB, Luk KDK. Strontium-containing hydroxyapatite bioactive bone cement in revision hip arthroplasty. *Biomaterials* 2006;27(24) 4348-4355.

- [867] Ni GX, Lu WW, Xu B, Chiu KY, Yang C, Li ZY, Lam WM, Luk KDK. Interfacial behaviour of strontium-containing hydroxyapatite cement with cancellous and cortical bone. *Biomaterials* 2006;27(29) 5127-5133.
- [868] Aina V, Bergandi L, Lusvardi G, Malavasi G, Imrie FE, Gibson IR, Cerrato G, Ghigo D. Sr-containing hydroxyapatite: morphologies of HA crystals and bioactivity on osteoblast cells. *Materials Science and Engineering: C* 2013;33(3) 1132-1142.
- [869] Zhu K, Yanagisawa K, Shimanouchi R, Onda A, Kajiyoshi K, Qiu J. Synthesis and crystallographic study of Pb–Sr hydroxyapatite solid solutions by high temperature mixing method under hydrothermal conditions. *Materials Research Bulletin* 2009;44(6) 1392-1396.
- [870] Tan S.-H, Chen X.-G, Ye Y, Sun J, Dai L.-Q, Ding Q. Hydrothermal removal of Sr^{2+} in aqueous solution via formation of Sr-substituted hydroxyapatite. *Journal of Hazardous Materials* 2010;179(1-3) 559-563.
- [871] Ning Z, Chang Z, Li W, Sun Ch, Zhang J, Liu Y. Solvothermal synthesis and optical performance of one-dimensional Strontium Hydroxyapatite nanorod. *Chinese Journal of Chemical Engineering* 2012;20(1) 89-94.
- [872] Grover LM, Gbureck U, Wright AJ, Barralet JE. Cement formulations in the calcium phosphate $\text{H}_2\text{O}-\text{H}_3\text{PO}_4-\text{H}_4\text{P}_2\text{O}_7$ system. *Journal of the American Ceramic Society* 2005;88 3096-3103.
- [873] Hofmann MP, Mohammed AR, Perrie Y, Gbureck U, Barralet JE. High-strength resorbable brushite bone cement with controlled drug-releasing capabilities. *Acta Biomaterialia* 2009;5 43-49.
- [874] Alkhraisat MH, Rueda C, Cabrejos-Azama J, Lucas-Aparicio J, Mariño FT, García-Denche JT, Jerez LB, Gbureck U, Cabarcos EL. Loading and release of doxycycline hyclate from strontium-substituted calcium phosphate cement. *Acta Biomaterialia* 2010;6(4) 1522-1528.
- [875] Ohura K, Bohner M, Hardouin P, Lemaitre J, Pasquier G, Flautre B. Resorption of, and bone formation from, new beta-tricalcium phosphate-monocalcium phosphate cements: an in vivo study. *Journal of Biomedical Materials Research* 1996;30(2) 193-200.
- [876] Frost RL, Palmer SJ. Thermal stability of the 'cave' mineral brushite $\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$ -Mechanism of formation and decomposition. *Thermochimica Acta* 2011;521(1-2) 14-17.
- [877] Francis MD, Webb NC. Hydroxyapatite formation for a hydrated calcium monohydrogen phosphite precursor. *Calcified Tissue International* 1971;6 335-342.
- [878] Abbona F, Christensson F, Angela MF, Madsen HEL. Crystal habit and growth conditions of brushite, $\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$. *Journal of Crystal Growth* 1993;131(3-4) 331-346.

- [879] Vereeche G, Lemaitre J. Calculation of the solubility diagrams in the system $\text{Ca}(\text{OH})_2\text{-H}_3\text{PO}_4\text{-KOH-HNO}_3\text{-CO}_2\text{-H}_2\text{O}$. *Journal of Crystal Growth* 1990;104 820-832.
- [880] Grover LM, Gbureck U, Young AM, Wright AJ, Barralet JE. Temperature dependent setting kinetics and mechanical properties of β -TCP-pyrophosphoric acid bone cement. *Journal of Materials Chemistry* 2005;15(46) 4955-4962.
- [881] Alkhraisat MH, Mariño FT, Rodríguez CR, Jerez LB, Cabarcos EL. Combined effect of strontium and pyrophosphate on the properties of brushite cements. *Acta Biomaterialia* 2008;4(3) 664-670.
- [882] Kondo N, Ogose A, Tokunaga K, Umezue H, Arai K, Kudo N, Hoshino M, Inoue H, Irie H, Kuroda K, Mera H. Osteoinduction with highly purified beta-tricalcium phosphate in dogdorsal muscles and the proliferation of osteoclasts before heterotopic bone formation. *Biomaterials* 2006;27(25) 4419-4427.
- [883] Hench LL. Bioceramics: from concept to clinic. *Journal of the American Ceramic Society* 1991;74(7) 1487-1510.
- [884] Yatongchai Ch, Wren AW, Curran DJ, Hornez J.-Ch, Towler MR. Comparison of the Weibull characteristics of hydroxyapatite and strontium doped hydroxyapatite. *Journal of the Mechanical Behavior of Biomedical Materials* 2013;21 95-108.
- [885] Tamimi F, Le Nihouannen D, Eimar H, Sheikh Z, Komarova S, Barralet J. The effect of autoclaving on the physical and biological properties of dicalcium phosphate dihydrate bioceramics: Brushite vs. Monetite. *Acta Biomaterialia* 2012;8(8) 3161-3169.
- [886] Njema H, Debbichi M, Boughzala K, Said M, Bouzouita K. Structural, electronic and thermodynamic properties of britholites $\text{Ca}_{10-x}\text{La}_x(\text{PO}_4)_{6-x}(\text{SiO}_4)_x\text{F}_2$ ($0 \leq x \leq 6$): Experiment and theory. *Materials Research Bulletin* 2014;51 210-216.
- [887] Njema H, Boughzala K, Boughzala H, Bouzouita K. Structural analysis by Rietveld refinement of calcium and lanthanum phosphosilicate apatites. *Journal of Rare Earths* 2013;31(9) 897-904.
- [888] Wang X, Gan J, Huang Y, Seo HJ. The doping concentration dependent tunable yellow luminescence of $\text{Sr}_5(\text{PO}_4)_2(\text{SiO}_4):\text{Eu}^{2+}$. *Ceramics International* 2012;38(1) 701-706.
- [889] Ouenzerfi RE, Cohen-Adad M.-T, Goutaudier Ch, Panczer G. Uranium-doped britholites $\text{Ca}_x\text{La}_y(\text{SiO}_4)_{6-u}(\text{PO}_4)_u\text{O}:\text{U}$ synthesis, characterization and preliminary study of uranium diffusion. *Solid State Ionics* 2005;176(1-2) 225-231.
- [890] Gmati N, Boughzala K, Abdellaoui M, Bouzouita K. Mechanochemical synthesis of strontium britholites: Reaction mechanism. *Comptes Rendus Chimie* 2011;14(10) 896-903.
- [891] Gmati N, Boughzala K, Chaabène A, Fattah N, Bouzouita K. Préparation par mécanosynthèse d'apatites strontiques dopées au lanthane et au césium. *Comptes Rendus Chimie* 2013;16(8) 712-720.

- [892] Krzmann MM, Valant M, Suvorov D. The synthesis and microwave dielectric properties of $\text{Sr}_x\text{Ba}_{1-x}\text{Al}_2\text{Si}_2\text{O}_8$ and $\text{Ca}_y\text{Ba}_{1-y}\text{Al}_2\text{Si}_2\text{O}_8$ ceramics. *Journal of the European Ceramic Society* 2007;27(2-3) 1181-1185.
- [893] Ferone C, Liguori B, Marocco A, Anaclerio S, Pansini M, Colella C. Monoclinic (Ba, Sr)-celsian by thermal treatment of (Ba, Sr)-exchanged zeolite A. *Microporous and Mesoporous Materials* 2010;134(1-3) 65-71.
- [894] Sung YM, Kim S. Sintering and crystallization of off-stoichiometric $\text{SrO} \cdot \text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$ glasses. *Journal of Materials Science* 2000;35 4293-4299.
- [895] Fu Y.-P, Chang Ch.-Ch, Lin Ch.-H, Chin T-S. Solid-state synthesis of ceramics in the $\text{BaO-SrO-Al}_2\text{O}_3\text{-SiO}_2$ system. *Ceramics International* 2004;30(1) 41-45.
- [896] Guillem MC, Guillem C. Kinetics and mechanism of formation of celsian from barium carbonate and kaolin. *Transactions and Journal of the British Ceramic Society* 1984;83 150-154.
- [897] Bansal NP, Setlock JA. Fabrication of fiber-reinforced celsian matrix composites. *Composites Part A: Applied Science and Manufacturing* 2001;32(8) 1021-1029.
- [898] BP. Mechanical properties of Hi-Nicalon fiber-reinforced celsian composites after high-temperature exposures in air. *Journal of the European Ceramic Society* 2009;29(3) 525-535.
- [899] Limeng L, Feng Y, Haijiao Z, Jie Y, Zhiguo Z. Celsian formation in $\text{Si}_3\text{N}_4\text{-Ba}_{0.75}\text{Sr}_{0.25}\text{Si}_2\text{Al}_2\text{O}_8$ composites. *Scripta Materialia* 2009;60(6) 463-466.
- [900] Strnad Z. *Glass-Ceramic Materials, Glass Science and Technology; Volume 8*; Amsterdam: Elsevier; 1986.
- [901] Barbeeri L, Corradi AB, Leonelli C, Manfredini T, Romagnoli M, Siligardi C. The microstructure and mechanical properties of sintered celsian and strontium-celsian glass-ceramics. *Materials Research Bulletin* 1995;30(1) 27-41.
- [902] Beall GH. Refractory glass-ceramics based on alkaline earth aluminosilicates. *Journal of the European Ceramic Society* 2009;29(7) 1211-1219.
- [903] Salman SM, Salama S.N, Abo-Mosallam HA. The role of strontium and potassium on crystallization and bioactivity of $\text{Na}_2\text{O-CaO-P}_2\text{O}_5\text{-SiO}_2$. *Ceramics International* 2012;38(1) 55-63.
- [904] Fredholm YC, Karpukhina N, Law RV, Hill RG. Strontium containing bioactive glasses: Glass structure and physical properties. *Journal of Non-Crystalline Solids* 2010;356(44-49) 2546-2551.
- [905] O'Donnell MD, Hill RG. Influence of strontium and the importance of glass chemistry and structure when designing bioactive glasses for bone regeneration. *Acta Biomaterialia* 2010;6(7) 2382-2385.

- [906] Xiao Li, Xiao Q, Liu Y, Ai P, Li Y, Wang H. A transparent surface-crystallized Eu^{2+} , Dy^{3+} co-doped strontium aluminate long-lasting phosphorescent glass-ceramic. *Journal of Alloys and Compounds* 2010;495(1) 72-75.
- [907] Qiua J, Shimizugawa Y, Kojima K, Tanaka K, Hirao K. Relaxation of ultraviolet-radiation-induced structure and long-lasting phosphorescence in Eu^{2+} -doped strontium aluminosilicate glasses. *Journal of Materials Research* 2001;16(1) 88-92.
- [908] Lan Z, Chengyu L, Qiang S. Long lasting phosphorescence in Eu^{2+} and Ce^{3+} co-coped strontium borate glasses. *Journal of Rare Earths* 2006;24(1) 196-198.
- [909] Huang A, Chen Y, Liu Q, Wang N, Jiang J, Caro J. Synthesis of highly hydrophobic and permselective metal-organic framework $\text{Zn}(\text{BDC})(\text{TED})_{0.5}$ membranes for H_2/CO_2 separation. *Journal of Membrane Science* 2014;454 126-132.
- [910] Chen X, Tong Y, Han M.-M, Cao K.-L, Feng Y.-L. Two luminescent metal - organic frameworks constructed by unsymmetric tricarboxylate. *Inorganic Chemistry Communications* 2014;40 62-65.
- [911] Lo S.-H, Liu H.-K, Zhan J.-X, Lin W.-Ch, Kao Ch.-Ch, Lin Ch.-H, Zima V. Assembly of a water-insoluble strontium metal-organic framework with luminescent properties. *Inorganic Chemistry Communications* 2011;14(10) 1602-1605.
- [912] Shen H, Song Y, Gu H, Wang P, Xi Y. A high-permittivity SrTiO_3 -based grain boundary barrier layer capacitor material single-fired under low temperature. *Materials Letters* 2002;56(5) 802-805.
- [913] Liu CY, Tseng TY. Correlation between deep depletion and current-voltage saturation of SrTiO_3 gate dielectric capacitor. *Ceramics International* 2004;30(7) 1101-1106.
- [914] Hu Y, Tan OK, Pan JS, Huang H, Cao W. The effects of annealing temperature on the sensing properties of low temperature nano-sized SrTiO_3 oxygen gas sensor. *Sensors and Actuators B: Chemical* 2005;108(1-2) 244-249.
- [915] Hu Y, Tan OK, Cao W, Zhu W. A low temperature nano-structured SrTiO_3 thick film oxygen gas sensor. *Ceramics International* 2004;30(7) 1819-1822.
- [916] Schultz AM, Zhu Y, Bojarski SA, Rohrer GS, Salvador PA. Eutaxial growth of hematite Fe_2O_3 films on perovskite SrTiO_3 polycrystalline substrates. *Thin Solid Films* 2013;548 220-224.
- [917] Nishio K, Ohnishi T, Akatsuka K, Takada K. Crystal orientation of epitaxial LiCoO_2 films grown on SrTiO_3 substrates. *Journal of Power Sources* 2014;247 687-691.
- [918] Chen L, Zhang S, Wang L, Xue D, Yin S. Preparation and photocatalytic properties of strontium titanate powders via sol-gel proces. *Journal of Crystal Growth* 2009;311(3) 746-748.

- [919] Huang X, Zhao H, Qiu W, Wu W, Li X. Performances of planar solid oxide fuel cells with doped strontium titanate as anode materials. *Energy Conversion and Management* 2007;48(5) 1678-1682.
- [920] Park B.-K, Lee J.-W, Lee S.-B, Lim T.-H, Park S.-J, Song R.-H, Im WB, Shin D.-R. La-doped SrTiO_3 interconnect materials for anode-supported flat-tubular solid oxide fuel cells. *International Journal of Hydrogen Energy* 2012;37(5) 4319-4327.
- [921] McCarthy GJ, White WB, Roy R. Phase Equilibria in the 1375°C Isotherm of the System Sr-Ti-O. *Journal of the American Ceramic Society* 1969;52(9) 463-467.
- [922] Jacob KT, Rajitha G. Thermodynamic properties of strontium titanates: Sr_2TiO_4 , $\text{Sr}_3\text{Ti}_2\text{O}_7$, $\text{Sr}_4\text{Ti}_3\text{O}_{10}$, and SrTiO_3 . *The Journal of Chemical Thermodynamics* 2011;43(1) 51-57.
- [923] Selmi F, Guerin F, Yu XD, Varadan VK, Varadan VV, Komarneni S. Microwave calcination and sintering of barium strontium titanate. *Materials Letters* 1992;12(6) 424-428.
- [924] Mohammadi MR, Fray DJ. Sol-gel derived nanocrystalline and mesoporous barium strontium titanate prepared at room temperature. *Particuology* 2011;9(3) 235-242.
- [925] Lahiry S, Mansingh A. Dielectric properties of sol-gel derived barium strontium titanate thin films. *Thin Solid Films* 2008;516(8) 1656-1662.
- [926] Makarova M, Dejneka A, Franc J, Drahokoupil J, Jastrabik L, Trepakov V. Soft chemistry preparation methods and properties of strontium titanate nanoparticles. *Optical Materials* 2010;32(8) 803-806.
- [927] Fujishiro F, Arakawa T, Hashimoto T. Substitution site and photoluminescence spectra of Eu^{3+} -substituted SrTiO_3 prepared by Pechini method. *Materials Letters* 2011;65(12) 1819-1821.
- [928] Choi K.-M, Kil H.-S, Lee Y.-S, Lim D.-Y, Cho S.-B, Lee BW. Preparation and luminescence properties of $\text{SrTiO}_3:\text{Pr}^{3+}, \text{Al}^{3+}$ phosphor from the glycolate method. *Journal of Luminescence* 2011;131(5) 894-899.
- [929] Lu X, Pine TS, Mumm DR, Brouwer J. Modified Pechini synthesis and characterization of Y-doped strontium titanate perovskite. *Solid State Ionics* 2007;178(19-20) 1195-1199.
- [930] Burnat D, Heel A, Holzer L, Kata D, Lis J, Graule T. Synthesis and performance of A-site deficient lanthanum-doped strontium titanate by nanoparticle based spray pyrolysis. *Journal of Power Sources* 2012;201 26-36.
- [931] Monteiro JF, Ferreira AAL, Antunes I, Fagg DP, Frade JR. Thermodynamic restrictions on mechanosynthesis of strontium titanate. *Journal of Solid State Chemistry* 2012;185 143-149.

- [932] Sekhar KC, Hong KP, Key SH, Han ChS, Kim JCh, Kim DS, Park JCh, Cho YS. Enhanced dielectric and tunable characteristics of K-doped $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{TiO}_3$ thin films prepared by pulsed laser deposition. *Current Applied Physics* 2012;12(3) 654-658.
- [933] Ioachim A, Toacsan MI, Banciu MG, Nedelcu L, Dutu A, Antohe S, Berbecaru C, Georgescu L, Stoica G, Alexandru HV. Transitions of barium strontium titanate ferroelectric ceramics for different strontium content. *Thin Solid Films* 2007;515(16) 6289-6293.
- [934] Hu T, Jantunen H, Uusimäki A, Leppävuori S. $\text{Ba}_{0.7}\text{Sr}_{0.3}\text{TiO}_3$ powders with B_2O_3 additive prepared by the sol-gel method for use as microwave material. *Materials Science in Semiconductor Processing* 2002;5(2-3) 215-221.
- [935] Jain M, Majumder SB, Guo R, Bhalla AS, Katiyar RS. Synthesis and characterization of lead strontium titanate thin films by sol-gel technique. *Materials Letters* 2002;56(5) 692-697.
- [936] Balasubramaniam KR, Cao Y, Patel N, Havelia S, Cox PJ, Devlin EC, Yu EP, Close BJ, Woodward PM, Salvador PA. Phase and structural characterization of $\text{Sr}_2\text{Nb}_2\text{O}_7$ and SrNbO_3 thin films grown via pulsed laser ablation in O_2 or N_2 atmospheres. *Journal of Solid State Chemistry* 2008;181(4) 705-714.
- [937] Liu D, Yao X, Smyth DM. Structure intergrowth in ceramic $\text{SrNbO}_{3.5-x}$. *Materials Research Bulletin* 1992;27(3) 387-392.
- [938] Lichtenberg F, Herrnberger A, Wiedenmann K, Mannhart J. Synthesis of perovskite-related layered $\text{A}_n\text{B}_n\text{O}_{3n+2} = \text{ABOX}$ type niobates and titanates and study of their structural, electric and magnetic properties. *Progress in Solid State Chemistry* 2001;29(1-2) 1-70.
- [939] Dahl PI, Haugrud R, Lein HL, Grande T, Norby T, Einarsrud M.-A. Synthesis, densification and electrical properties of strontium cerate ceramics. *Journal of the European Ceramic Society* 2007;27(16) 4461-4471.
- [940] Aksenova TI, Khromushin IV, Zhotabaev ZR, Bukenov KD, Berdauletov AK, Medvedeva ZV. Thermodesorption study of barium and strontium cerates. *Solid State Ionics* 2003;162-16331-36.
- [941] Liu S, Tan X, Li K, Hughes R. Synthesis of strontium cerates-based perovskite ceramics via water-soluble complex precursor routes. *Ceramics International* 2002;28(3) 327-335.
- [942] Wei X, Lin YS. Protonic and electronic conductivities of terbium doped strontium cerates. *Solid State Ionics* 2008;178(35-36) 1804-1810.
- [943] Matsuka M, Sakai T, Matsumoto H, Braddock RD, Agranovski IE, Ishihara T. Effects of hydrogen on phase stability of ytterbium doped strontium cerates. *Materials Letters* 2010;64(7) 833-835.

- [944] Zhu Z.-L, Gu J.-H, Jia Y, Hu X. A comparative study of electronic structure and magnetic properties of SrCrO_3 and SrMoO_3 . *Physica B: Condensed Matter* 2012;407(12) 1990-1994.
- [945] Chamberland BL. Preparation and properties of SrCrO_3 . *Solid State Communications* 1967;5(8) 663-666.
- [946] Agarwal R, Singh Z, Venugopal V. Calorimetric investigations of SrMoO_3 and BaMoO_3 compounds. *Journal of Alloys and Compounds* 1999;282(1-2) 231-235.
- [947] Macquart RB, Kennedy BJ, Avdeev M. Neutron diffraction study of phase transitions in perovskite-type strontium molybdate SrMoO_3 . *Journal of Solid State Chemistry* 2010;183(1) 250-255.
- [948] Yoo Y.-Z, Chmaissem O, Song J.-H. RHEED study on continuously repeated step flow and layer-by-layer growth modes in $\text{SrRuO}_3/\text{SrMnO}_3$ superlattice. *Current Applied Physics* 2014;14(3) 378-382.
- [949] Doroftei C, Popa PD, Rezlescu E, Rezlescu N. Nanocrystalline SrMnO_3 powder as catalyst for hydrocarbon combustion. *Journal of Alloys and Compounds* 2014;584 195-198.
- [950] Yaremchenko AA, Kharton VV, Valente AA, Shaula AL, Marques FMB, Rocha J. Mixed conductivity and electrocatalytic performance of $\text{SrFeO}_{3-\delta}$ - SrAl_2O_4 composite membranes. *Solid State Ionics* 2006;177(26-32) 2285-2289.
- [951] Hancock CA, Slade RCT, Varcoe JR, Slater PR. Synthesis, structure and conductivity of sulfate and phosphate doped SrCoO_3 . *Journal of Solid State Chemistry* 2011;184(11) 2972-2977.
- [952] Pyatnitsky YI, Ilchenko NI, Raevskaya LN, Dolgikh LY, Pavlenko NV. Methane coupling over SrCoO_3 -based perovskites in the absence of gas-phase oxygen. *Studies in Surface Science and Catalysis* 2000;130 707-712.
- [953] Rafferty A, Prescott T, Brabazon D. Sintering behaviour of cobalt ferrite ceramic. *Ceramics International* 2008;34 15-21.
- [954] Onreabroy W, Papato K, Rujijanagul G, Pengpat K, Tunkasiri T. Study of strontium ferrites substituted by lanthanum on the structural and magnetic properties. *Ceramics International* 2012;38(Supplement 1) S415-S419.
- [955] Stanica N, Cimpoesu F, Dobrescu G, Munteanu G, Suh S.-H. Monte Carlo simulation of magnetic ordering in the $\text{Gd}_3\text{Fe}_5\text{O}_{12}$ Ising ferrite with garnet structure. *Journal of Magnetism and Magnetic Materials* 2008;320(17) 2149-2154.
- [956] Liu X, Zhong W, Yang S, Yu Z, Gu B, Du Y. Influences of La^{3+} substitution on the structure and magnetic properties of M-type strontium ferrites. *Journal of Magnetism and Magnetic Materials* 2002;238(2-3) 207-214.

- [957] Ketov SV, Yagodkin YD, Menushenkov VP. Structure and magnetic properties of strontium ferrite anisotropic powder with nanocrystalline structure. *Journal of Alloys and Compounds* 2011;509(3) 1065-1068.
- [958] Liu X, Hernández-Gómez P, Huang K, Zhou S, Wang Y, Cai X, Sun H, Ma B. Research on La^{3+} - Co^{2+} -substituted strontium ferrite magnets for high intrinsic coercive force. *Journal of Magnetism and Magnetic Materials* 2006;305(2) 524-528.
- [959] Veverka P, Knížek K, Pollert E, Boháček J, Vasseur S, Duguet E, Portier J. Strontium ferrite nanoparticles synthesized in presence of polyvinylalcohol: Phase composition, microstructural and magnetic properties. *Journal of Magnetism and Magnetic Materials* 2007;309(1) 106-112.
- [960] Ghasemi A, Morisako A, Liu X. Magnetic properties of hexagonal strontium ferrite thick film synthesized by sol-gel processing using SrM nanoparticles. *Journal of Magnetism and Magnetic Materials* 2008;320(18) 2300-2304.
- [961] Teh GB, Wong YCh, Tilley RD. Effect of annealing temperature on the structural, photoluminescence and magnetic properties of sol-gel derived Magnetoplumbite-type (M-type) hexagonal strontium ferrite. *Journal of Magnetism and Magnetic Materials* 2011;323(17) 2318-2322.
- [962] Lu HF, Hong RY, Li HZ. Influence of surfactants on co-precipitation synthesis of strontium ferrite. *Journal of Alloys and Compounds* 2011;509(41) 10127-10131.
- [963] Anis-ur-Rehman M, Asghar G. Variation in structural and dielectric properties of co-precipitated nanoparticles strontium ferrites due to value of pH. *Journal of Alloys and Compounds* 2011;509(2) 435-439.
- [964] Shirtcliffe NJ, Thompson S, O'Keefe ES, Appleton S, Perry CC. Highly aluminium doped barium and strontium ferrite nanoparticles prepared by citrate auto-combustion synthesis. *Materials Research Bulletin* 2007;42(2) 281-287.
- [965] Burtfoot JC. *Ferroelectrics: An Introduction to the Physical Principles*. London: Van Nostrand-Reinbold; 1967.
- [966] Molla J, Gonzalez M, Villa R, Ibara A. Effect of humidity on microwave dielectric losses of porous alumina. *Journal of Applied Physics* 1999;85 1727-1730.
- [967] Bednorz JG, Müller KA. Possible high T_c superconductivity in the Ba-La-Cu-O system *Zeitschrift für Physik B* 1986;64 189-193.
- [968] Kamimura H, Ushio H, Matsuno S. Theory of lanthanum copper oxide (LSCO) superconductors. *Physica C: Superconductivity* 2007;460-462 991-992.
- [969] Anis-ur-Rehman M, Mubeen M. Synthesis and enhancement of current density in cerium doped Bi(Pb)Sr(Ba)-2223 high T_c superconductor. *Synthetic Metals* 2012;162(19-20) 1769-1774.

- [970] Li S, Hu QY, Liu HK, Dou SX, Gao W. The grain alignment of Bi2223, Bi2212 and Bi2223 + Bi2212 phases in mechanical deformation and annealing processes. *Physica C: Superconductivity* 1997;279(3-4) 265-276.
- [971] On DT, Sato O, Fujishima A, Hashimoto K. Change of the critical temperature of high-T_c single (2223) phase Bi-Pb-Sr-Ca-Cu-O superconductors by intercalation process *Journal of Physics and Chemistry of Solids* 1999;60(7) 883-890.
- [972] Anis-ur-Rehman M, Maqsood A. Study of the thermal behaviour of Bi(Pb)Sr(Ba)-2223 high-T_c granular superconductors. *Physica C: Superconductivity* 2005;418(3-4) 121-130.
- [973] Tampieri A, Calestani G, Celotti G, Masini R, Lesca S. Multi-step process to prepare bulk BSCCO (2223) superconductor with improved transport properties. *Physica C: Superconductivity* 1998;306(1-2) 21-33.
- [974] Kandyel E, Wu X.-J, Adachi S, Tajima S. New Tl-Sr-Ca-Cu-O superconductor with 2223-type structure stabilized by mercury under high-pressure. *Physica C: Superconductivity* 1999;328(1-2) 44-52.
- [975] Sundaresan A, Asada H, Crisan A, Nie JC, Kito H, Iyo A, Tanaka Y, Kusunoki M, Ohshima S. Preparation of Tl-2212 and -1223 superconductor thin films and their microwave properties. *Physica C: Superconductivity* 2003;388-389 473-474.
- [976] Liu RS, Hu SH, Jefferson DA, Edwards PP. Superconductivity at 124 K in (Tl_{0.5}Pb_{0.5})Sr₂Ca₂Cu₃O₉. *Physica C* 1992;198 318-322.
- [977] Marcos MD, Attfield JP. Crystal structure of Tl_{0.5}Pb_{0.5}Sr₂Ca₂Cu₃O₉ at 300 K and around T_c (118 K). *Physica C: Superconductivity* 1996;270(3-4) 267-273.
- [978] Hayri EA, Greenblatt M. Superconductivity in Tl₂Ba_{2-x}Sr_xCaCu₂O₈ solid solutions: T_c ≈ 44 K for a composition with x = 2.0. *Physica C* 1988;156(5) 775-780.
- [979] Singh B, Gupta S, Sharma N, Goyal SC. Higher order elastic constants of La_{1.85}Sr_{0.15}CuO₄ high temperature superconductor. *Physica C: Superconductivity* 2005;419(1-2) 1-6.
- [980] Akhter S, Paul DP. Estimation of nucleation thermodynamical parameters of La₂Sr₂CuO₄ (LSCO) crystallizing from high temperature solution. *Materials Chemistry and Physics* 2004;88(1) 41-45.
- [981] Jayachandran KP, Menon CS. Mode Grüneisen parameters and the low temperature thermal expansion of high-T_c superconductor La_{1.8}Sr_{0.2}CuO₄. *Physica C: Superconductivity* 2002;383(1-2) 159-168.
- [982] Hardy V, Martin C, Damay F, André G. Magnetic couplings in the quasi-2D triangular Heisenberg antiferromagnets α-ACr₂O₄ (A = Ca, Sr, Ba). *Journal of Magnetism and Magnetic Materials* 2013;330 111-118.

- [983] Zhao L, Wang K.-J, Wen M.-H, Wu M.-K. Floating-zone growth and characterization of triangular lattice antiferromagnetic α - SrCr_2O_4 crystals. *Journal of Crystal Growth* 2014;392 81-86.
- [984] Müller-Buschbaum H. The crystal chemistry of AM_2O_4 oxometallates. *Alloys and Compounds* 2003;349(1-2) 49-104.
- [985] Moissan H. Nouvelles expériences sur la reproduction du diamant. *Comptes rendus de l'Académie des sciences* 1894;118 320-326.
- [986] Moissan H. *Bulletin de la Société Chimique de France* 1894;11 1002.
- [987] Moissan H. *Annales de Chimie et de Physique* 1896;9 247.
- [988] Ruschewitz U. Binary and ternary carbides of alkali and alkaline-earth metals. *Coordination Chemistry Reviews* 2003;244(1-2) 115-136.
- [989] Vohn V, Knapp M, Ruschewitz U. Synthesis and Crystal Structure of SrC_2 . *Journal of Solid State Chemistry* 2000;151(1) 111-116.
- [990] Xiao B, Feng J, Chen JC, Yu L. Crystal structures and electronic properties of MC_2 ($\text{M} = \text{Mg}, \text{Ca}, \text{Sr}, \text{Ba}$) by comparative studies based on ab-initio calculations. *Chemical Physics Letters* 2007;448(1-3) 35-40.
- [991] Inumaru K, Kuroda Y, Sakamoto K, Murashima M, Yamanaka S. Synthesis and high metallic conductivity of layer-structured Sr_2N thin film deposited onto $\text{MgO}(001)$ substrate. *Journal of Alloys and Compounds* 2004;372(1-2) L1-L3.
- [992] Reckeweg O, DiSalvo FJ. Alkaline earth metal nitride compounds with the composition M_2NX ($\text{M} = \text{Ca}, \text{Sr}, \text{Ba}$; $\text{X} = \square, \text{H}, \text{Cl}$ or Br). *Solid State Sciences* 2002;4(5) 575-584.
- [993] Bowman A, Smith RI, Gregory DH. Synthesis and structure of the ternary and quaternary strontium nitride halides, $\text{Sr}_2\text{N}(\text{X}, \text{X}')$ ($\text{X}, \text{X}' = \text{Cl}, \text{Br}, \text{I}$). *Journal of Solid State Chemistry* 2006;179(1) 130-139.
- [994] Alahmed ZA, Reshak AH. DFT calculation of the electronic structure and optical properties of two strontium germanium nitrides: α - Sr_2GeN_2 and β - Sr_2GeN_2 . *Journal of Alloys and Compounds* 2013;559 181-187.
- [995] Bowman A, Gregory DH. Synthesis and characterisation of the ternary nitride, Sr_2TaN_3 . *Journal of Alloys and Compounds* 2003;348(1-2) 80-87.
- [996] Balducci G, Brutti S, Ciccioli A, Gigli G, Trionfetti G, Palenzona A, Pani M. Vapor pressures and thermodynamic properties of strontium silicides. *Intermetallics* 2006;14(5) 578-583.
- [997] Shein IR, Ivanovskii AL. Electronic band structure of pseudo-binary AlB_2 -like hexagonal silicides $\text{SrNi}_x\text{Si}_{2-x}$ as novel low-TC superconductors. *Physica B: Condensed Matter* 2012;407(23) 4592-4594.

- [998] Garay-Tapia AM, Romero AH, Trapaga G, Arróyave R. First-principles investigation of the Al–Si–Sr ternary system: Ground state determination and mechanical properties. *Intermetallics* 2012;21(1) 31-44.
- [999] Kauzlarich SM, Condrón CL, Wassei JK, Ikeda T, Snyder GJ. Structure and high-temperature thermoelectric properties of SrAl_2Si_2 . *Journal of Solid State Chemistry* 2009;182(2) 240-245. D.Moser,D.
- [1000] Lee MH, Sankey OF, Björling T, Noréus D, Parker SF, Häussermann U. Vibrational Properties of Polyanionic Hydrides SrAl_2H_2 and SrAlSiH : New Insights into Al-H Bonding Interactions *Inorganic Chemistry* 2007;46(18) 6987-6991.
- [1001] Kranak VF, Evans MJ, Daemen LL, Proffen T, Lee MH, Sankey OF, Häussermann U. Structural and dynamic properties of the polyanionic hydrides SrAlGeH and BaAlGeH . *Solid State Sciences* 2009;11(11) 1847-1853.
- [1002] Evans NDM. Binding mechanisms of radionuclides to cement. *Cement and Concrete Research* 2008;38(4) 543-553.
- [1003] Omotoso OE, Ivey G, Mikula R. Containment mechanism of trivalent chromium in tricalcium silicate. *Journal of Hazardous Materials* 1998;60 1-28.
- [1004] Atkins M, Glasser FP. Application of Portland cement-based materials to radioactive waste immobilization. *Waste Management* 1992;12 105-131.
- [1005] Rahman ROA, El Abidin DHAZ, Abou-Shady H. Assessment of strontium immobilization in cement–bentonite matrices. *Chemical Engineering Journal* 2013;228 772-780.
- [1006] El-Kamash AM, El-Naggar MR, El-Dessouky MI. Immobilization of cesium and strontium radionuclides in zeolite-cement blends. *Journal of Hazardous Materials* 2006;136(2) 310-316.
- [1007] Bensted J, Varma SP. Ettringite and its derivatives. *Cement Technology* 1971;2 73-76.
- [1008] Heimann RB. Interaction of cement and radioactive waste forms in multicomponent systems tests at 200°C Part 1: Leaching and Sorption of cesium, strontium and actinides. *Cement and Concrete Research* 1988;18(3) 389-400.
- [1009] Ayvaci M, Ege A, Yerci S, Can N. Synthesis and optical properties of Er^{3+} and Eu^{3+} doped SrAl_2O_4 phosphor ceramic. *Journal of Luminescence* 2011;131 2432-2439.
- [1010] Kacimi L, Simon-Masseron A, Salem S, Ghomari A, Derriche Z. Synthesis of belite cement clinker of high hydraulic reactivity. *Cement and Concrete Research* 2009;39(7) 559-565.
- [1011] Ptáček P, Opravil T, Šoukal F, Havlica J, Holešinský R. Kinetics and mechanism of formation of gehlenite, Al–Si spinel and anorthite from the mixture of kaolinite and calcite. *Solid State Sciences* 2013;26 53-58.

- [1012] Marocco A, Liguori B, Dell'Agli G, Pansini M. Sintering behaviour of celsian based ceramics obtained from the thermal conversion of (Ba, Sr)-exchanged zeolite A. *Journal of the European Ceramic Society* 2011;31(11) 1965-1973.
- [1013] Abe T, Sukamoto K, Sunagawa I. Nucleation, growth and stability of $\text{CaAl}_2\text{Si}_2\text{O}_8$ polymorphs. *Physics and Chemistry of Minerals* 1991;17(6) 473-484.
- [1014] Arifov PA, Bulatova MM. Triangulation and Specific Features of the Phase Formation in Strontium Aluminosilicate Glass-Forming Systems. *Glass Physics and Chemistry* 2004;30(2) 198-201.
- [1015] Nielsen SP. The biological role of strontium. *Bone* 2004;35(3) 583-588.
- [1016] Jensen J.-EB, Stang H, Kringsholm B. Relationship between trace element content and mechanical bone strength. *Bone* 1997;20(Suppl 4) 104.
- [1017] Morohashi T, Sano T, Yamada S. Effects of strontium on calcium metabolism in rats: I. A distinction between pharmacologic and toxic doses. *Japanese Journal of Pharmacology* 1994;64(3) 155-162.
- [1018] Tipple BJ, Chau T, Chesson LA, Fernandez DP, Ehleringer JR. Isolation of strontium pools and isotope ratios in modern human hair. *Analytica Chimica Acta* 2013;798 64-73.
- [1019] Fenner JN, Wright LE. Revisiting the strontium contribution of sea salt in the human diet. *Journal of Archaeological Science* 2014;44 99-103.
- [1020] Wright LE. Immigration to Tikal, Guatemala: Evidence from stable strontium and oxygen isotopes. *Journal of Anthropological Archaeology* 2012;31(3) 334-352.
- [1021] Bataille CP, Bowen GJ. Mapping $^{87}\text{Sr}/^{86}\text{Sr}$ variations in bedrock and water for large scale provenance studies. *Chemical Geology* 2012;304-305 39-52.
- [1022] Kremenović A, Colomban Ph, Piriou B, Massiot D, Florian P. Structural and spectroscopic characterization of the quenched hexacelsian. *Journal of Physics and Chemistry of Solids* 2003;64(11) 2253-2268.
- [1023] Romero-Serrano A, Cruz-Ramirez A, Zeifert B, Hallen-Lopez M, Hernandez-Ramirez A. Thermodynamic Modeling of the BaO-SiO_2 and SrO-SiO_2 Binary Melts. *Glass Physics and Chemistry* 2010;36(2) 171-178.
- [1024] Zhou L, Guo J, Yang N, Li L. K⁺ Solid-state magnetic resonance and infrared spectroscopy of alkali feldspars. *Science in China (Series D)* 1997;40(2) 159-165.
- [1025] Le Parc R, Champagnon B, Dianoux J, Jarry P, Martinez V. Anorthite and $\text{CaAl}_2\text{Si}_2\text{O}_8$ glass: low frequency Raman spectroscopy and neutron scattering. *Journal of Non-Crystalline Solids* 2003;323 155-161.
- [1026] Velde B, Syono Y, Couty R, Kikuchi M. High pressure infrared spectra of diaplectic anorthite glass. *Physics and Chemistry of minerals* 1987;14 345-349.

- [1027] Dowty E. Vibrational interactions of tetrahedra in silicate glasses and crystals: II. Calculations on melilites, pyroxenes, silica polymorphs and feldspars. *Physics and Chemistry of minerals* 1987;14 122-138.
- [1028] Yang Y, Min Y, Lococo J, Jun Y.-Sh. Effects of Al/Si ordering on feldspar dissolution: Part I. Crystallographic control on the stoichiometry. *Geochimica et Cosmochimica Acta* 2014;126 574-594.
- [1029] Anbalagan G, Sankari G, Ponnusamy S, Thilak kumar R, Gunasekaran S. Investigation of silicate mineral sanidine by vibrational and NMR spectroscopic methods. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 2009;74(2) 404-409.
- [1030] Orlova LA, Popovich NV, Uvarova NE, Paleari A, Sarkisov PD. High-temperature resistant glass-ceramics based on Sr-anorthite and tialite phases. *Ceramics International* 2012;38(8) 6629-6634.
- [1031] Ibrahim DM, Mostafa AA, Khalil T. Preparation of tialite (aluminium titanate) via the urea formaldehyde polymeric route. *Ceramics International* 1999;25(8) 697-704.
- [1032] Zabicky J, Kimmel G, Yaaran J, Zevin L. Thermal anisotropy of tialite (Al_2TiO_5) by powder XRD. *Nanostructured Materials* 1995;6(5-8) 675-678.
- [1033] Wang S.-F, Hsu Y.-F, Lu H.-Ch, Lo S.-Ch, Cheng Ch.-S. B_2O_3 -free SiO_2 - Al_2O_3 - SrO - La_2O_3 - ZnO - TiO_2 glass sealants for intermediate temperature solid oxide fuel cell applications. *International Journal of Hydrogen Energy* 2012;37(7) 5901-5913.
- [1034] Ojha PK, Chongdar TK, Gokhale NM, Kulkarni AR. Investigation of crystallization kinetic of SrO - La_2O_3 - Al_2O_3 - B_2O_3 - SiO_2 glass and its suitability for SOFC sealant. *International Journal of Hydrogen Energy* 2011;36(22) 14996-15001.
- [1035] Mahapatra MK, Lu K, Reynolds Jr WT. Thermophysical properties and devitrification of SrO - La_2O_3 - Al_2O_3 - B_2O_3 - SiO_2 -based glass sealant for solid oxide fuel/electrolyzer cells. *Journal of Power Sources* 2008;179(1) 106-112.
- [1036] Mallik A, Kundu P, Basumajumdar A. Nucleation, crystallization behavior and microstructure of mica glass-ceramics in the system $\text{SrO} \cdot 4\text{MgO} \cdot x\text{Al}_2\text{O}_3 \cdot 6\text{SiO}_2 \cdot 2\text{MgF}_2$ ($x=1, 1.5$ and 2). *Ceramics International* 2013;39(6) 6963-6969.
- [1037] Duan F. The role of PbO on crystallization in PbO - SrO - TiO_2 - SiO_2 glass. *Journal of Non-Crystalline Solids* 2010;356(43) 2286-2288.
- [1038] Hazeli K, Sadeghi A, Pekguleryuz MO, Kontsos A. The effect of strontium in plasticity of magnesium alloys. *Materials Science & Engineering A* 2013;578 383-393.
- [1039] Niu J.-x, Chen Q.-r, Xu N.-x, Wei Z.-l. Effect of combinative addition of strontium and rare earth elements on corrosion resistance of AZ91D magnesium alloy. *Transactions of Nonferrous Metals Society of China* 2008;18 1058-1064.

- [1040] SadeghiA, PekguleryuzM. Microstructure, mechanical properties and texture evolution of AZ31 alloy containing trace levels of strontium. *Materials Characterization* 2011;62(8) 742-750.
- [1041] TimpelM, WanderkaN, SchlesigerR, YamamotoT, LazarevN, IsheimD, SchmitzG, MatsumuraS, BanhartJ. The role of strontium in modifying aluminium-silicon alloys. *Acta Materialia* 2012;60(9) 3920-3928.
- [1042] ShabestariSG, KeshavarzM, HejaziMM. Effect of strontium on the kinetics of formation and segregation of intermetallic compounds in A380 aluminum alloy. *Journal of Alloys and Compounds* 2009;477(1-2) 892-899.