

DAFTAR PUSTAKA

- Abdallah, F.B., Benali, A., Azizi, S., Triki, M., Dhahri, E., Graça, M.P.F., Valente, M.A. (2019). Strontium-substituted $\text{La}_{0.75}\text{Ba}_{0.25-x}\text{Sr}_x\text{FeO}_3$ ($x = 0.05, 0.10$ and 0.15) perovskite: dielectric and electrical studies. *J. Mater. Sci. Mater. Electron.* 30, 8457-8470.
- Aprea, C., Greco, A., Maioriono, A., Masselli, C. (2017). Electrocaloric refrigeration : an innovative, emerging, eco-friendly refrigeration technique, in: *Journal of Physics: Conference Series*. pp. 1–11.
- Axelsson, A.K., Le Goupil, F., Valant, M., Alford, N.M. (2017). Electrocaloric effect in lead-free Aurivillius relaxor ferroelectric ceramics. *Acta Mater.* 124, 120–126.
- Bakkali, H., Dominguez, M., Batlle, X., Labarta, A. (2016). Universality of the electrical transport in granular metals. *Sci. Rep.* 6, 1–8.
- Balachandran, P. V, Rondinelli, J.M. (2015). Massive band gap variation oxides through cation ordering. *Nat. Commun.* 6, 1–7.
- Balachandran, P. V, Young, J., Lookman, T., Rondinelli, J.M. (2017). Learning from data to design functional materials without inversion symmetry. *Nat. Commun.* 8, 1–13.
- Belous, A., V'Yunov, O., Mishchuk, D., Kamba, S., Nuzhnyy, D. (2007). Effect of vacancies on the structural and relaxor properties of $(\text{Sr},\text{Ba},\text{Na})\text{Nb}_2\text{O}_6$. *J. Appl. Phys.* 102, 9–15.
- Beznosikov, B. V, Aleksandrov, K.S. (2000). Perovskite-Like Crystals of the Ruddlesden – Popper Series1. *Crystallogr. Reports* 45, 864–870.
- Bhalla, A.S., Guo, R., Roy, R. (2000). The perovskite structure – a review of its role in ceramic science and technology. *Mater. Research Innov.* 4, 3–26.
- Bieringer, M., Greedan, J.E. (2002). Structure and magnetism in $\text{BaLaMnO}_{4\pm\delta}$ ($\delta = 0.00, 0.10$) and $\text{Ba}_x\text{Sr}_{1-x}\text{LaMnO}_4$. Disappearance of magnetic order for $x > 0.30$. *J. Mater. Chem.* 12, 279–287.
- Bocher, L., Aguirre, M.H., Logvinovich, D., Shkabko, A., Robert, R., Trottmann, M., Weidenkaff, A. (2008). $\text{CaMn}_{1-x}\text{Nb}_x\text{O}_3$ ($x \leq 0.08$) Perovskite-Type Phases As Promising New High-Temperature n-Type Thermoelectric Materials. *Inorg. Chem.* 47, 8077–8085.
- Bock, J.A., Trolier-mckinstry, S., Mahan, G.D., Randall, C.A. (2014). Polarization-based perturbations to thermopower and electronic conductivity in highly conductive tungsten bronze structured $(\text{Sr}, \text{Ba})\text{Nb}_2\text{O}_6$: Relaxors vs normal ferroelectrics. *Phys. Rev. B* 90, 1–8.

- Boseggia, S., Springell, R., Walker, H.C., Boothroyd, A.T., Prabhakaran, D., Vermeille, D., Bouchenoire, L., Collins, S.P., Mcmorrow, D.F. (2012). Antiferromagnetic order and domains in $\text{Sr}_3\text{Ir}_2\text{O}_7$ probed by x-ray resonant scattering. *Phys. Rev. B* 85, 1–8.
- Bredas, J. (2014). Mind the gap! *Mater. Horizons* 1, 17–19.
- Buurma, A.J.C., Blake, G.R., Palstra, T.T.M., Adem, U. (2016). *Multiferroic Materials : Physics and Properties, Reference Module in Materials Science and Materials Engineering*. Elsevier Ltd.
- Cao, D.H., Stoumpos, C.C., Yokoyama, T., Logsdon, J.L., Song, T., Farha, O.K., Wasielewski, M.R., Hupp, J.T., Kanatzidis, M.G. (2017). Thin Films and Solar Cells Based on Semiconducting Two-Dimensional Ruddlesden-Popper $(\text{CH}_3(\text{CH}_2)_3\text{NH}_3)_2(\text{CH}_3\text{NH}_3)_{n-1}\text{Sn}_n\text{I}_{3n+1}$ Perovskites. *ACS Energy Lett.* 2, 982–990.
- Cao, E., Qin, Y., Cui, T., Sun, L., Hao, W., Zhang, Y. (2017). Influence of Na doping on the magnetic properties of LaFeO_3 powders and dielectric properties of LaFeO_3 ceramics prepared by citric sol-gel method. *Ceram. Int.* 43, 7922–7928.
- Chai, P., Liu, X., Lu, M., Wang, Z., Meng, J. (2008). Structures and Physical Properties of $n = 3$ Ruddlesden – Popper Compounds $\text{Ca}_4\text{Mn}_{3-x}\text{Nb}_x\text{O}_{10}$ ($0 \leq x \leq 0.2$). *Chem. Mater.* 20, 1988–1996.
- Chang, H., Chen, H., Shao, Z., Shi, J., Bai, J., Li, S. (2016). In situ fabrication of $(\text{Sr},\text{La})\text{FeO}_4$ with COFe alloy nanoparticles as an independent catalyst layer for direct methane-based solid oxide fuel cells with cermet anode. *J. Mater. Chem. A* 4, 13997–14007.
- Chen, H., Guo, S., Dong, X., Cao, F., Mao, C., Wang, G. (2017). $\text{Ca}_x\text{Sr}_{0.3-x}\text{Ba}_{0.7}\text{Nb}_2\text{O}_6$ lead-free pyroelectric ceramics with high depoling temperature. *J. Alloys Compd.* 695, 2723–2729.
- Chen, H., Sun, X., Xu, X. (2017). Ruddlesden-Popper compounds $(\text{SrO})(\text{LaFeO}_3)_n$ ($n = 1$ and 2) as p-type semiconductors for photocatalytic hydrogen production. *Electrochim. Acta* 252, 138–146.
- Chen, T., Wu, S.Y., Liu, X.Q., Chen, X.M. (2017). A novel sol-gel route to synthesize $(\text{Sr}_{0.5}\text{Ba}_{0.5})\text{Nb}_2\text{O}_6$ ceramics with enhanced electrocaloric effect. *J. Adv. Dielectr.* 7, 1750012.
- Cheng, X., Shen, M. (2007). Enhanced spontaneous polarization in Sr and Ca co-doped BaTiO_3 ceramics. *Solid State Commun.* 141, 587–590.
- Chern, G., Hsieh, W.K., Tai, M.F., Hsung, K.S. (1998). High dielectric permittivity and hole-doping effect in $\text{La}_{1-x}\text{Sr}_x\text{FeO}_3$. *Phys. Rev. B* 58, 1252–1260.
- Chiu, F.-C. (2014). A Review on Conduction Mechanisms in Dielectric Films. *Adv. Mater. Sci. Eng.* 578168, 1–18.

- Curecheriu, L.P., Frunza, R., Lanculescu, A. (2008). Dielectric properties of the $\text{BaTi}_{0.85}\text{Zr}_{0.15}\text{O}_3$ ceramics prepared by different techniques. *Process. Appl. Ceram.* 2, 81–88.
- Damyanova, S., Pawelec, B., Palcheva, R., Karakirova, Y., Capel-Sanchez, M.C., Tyuliev, G., Gaigneaux, E., Fierro, J.L.G. (2018). Structure and surface properties of ceria-modified Ni-based catalysts for hydrogen production. *Appl. Catal. B Environ.* 225, 340–353.
- Dass, R.I., Yan, J.-Q., Goodenough, J.B., 2003. Oxygen stoichiometry, ferromagnetism, and transport properties of $\text{La}_{2-x}\text{NiMnO}_{6+\delta}$. *Phys. Rev. B* 68, 1–12.
- Desilva, A.W., Vunni, G.B. (2011). Electrical conductivity of dense Al, Ti, Fe, Ni, Cu, Mo, Ta, and W plasmas. *Phys. Rev. E - Stat. Nonlinear, Soft Matter Phys.* 83, 4–7.
- Dhak, P., Dhak, D., Das, M., Pramanik, P. (2011). Dielectric and impedance spectroscopy study of $\text{Ba}_{0.8}\text{Bi}_{2.133}\text{Nb}_{1.6}\text{Ta}_{0.4}\text{O}_9$ ferroelectric ceramics, prepared by chemical route. *J. Mater. Sci. Mater. Electron.* 22, 1750–1760.
- Ding, J., Liu, Y., Lu, Y., Qian, H., Gao, H., Chen, H., Ma, C. (2014). Enhanced energy-storage properties of $0.89\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3-0.06\text{BaTiO}_3-0.05\text{K}_{0.5}\text{Na}_{0.5}\text{NbO}_3$ lead-free anti-ferroelectric ceramics by two-step sintering method. *Mater. Lett.* 114, 107–110.
- Ding, Y., Zhao, Q., Yu, Z., Zhao, Y., Liu, B., He, P., Zhou, H., Li, K., Yin, S., Cai, M., 2019. Strong thickness-dependent quantum confinement in all-inorganic perovskite Cs_2PbI_4 with a Ruddlesden-Popper structure. *J. Mater. Chem. C* 7, 7433–7441.
- Dinh, T.H., Han, H.-S., Lee, J.-S. (2015). Ergodicity and Nonergodicity in La-doped $\text{Bi}_{1/2}(\text{Na}_{0.82}\text{K}_{0.18})_{1/2}\text{TiO}_3$ relaxors. *J. Korean Phys. Soc.* 66, 1077–1081.
- Doig, K.I., Peters, J.J.P., Nawaz, S., Walker, D., Walker, M., Lees, M.R., Beanland, R., Sanchez, A.M., Mcconville, C.F., Palkar, V.R., Lloyd-Hughes, J. (2015). Structural, optical and vibrational properties of self-assembled $\text{Pbn}_{+1}(\text{Ti}_{1-x}\text{Fe}_x)_n\text{O}_{3n+1-\delta}$ Ruddlesden-Popper superstructures. *Sci. Rep.* 5, 1–10.
- Eka, Y., Suhana, P., Said, M., Refinel, R., Ohtaki, M., Syukri, S. (2018). Low Thermal Conductivity of RE - Doped $\text{SrO}(\text{SrTiO}_3)_1$ Ruddlesden Popper Phase Bulk Materials Prepared by Molten Salt Method. *Electron. Mater. Lett.* 14, 556–562.
- Es'kov, A. V, Anokhin, S.A., Bui, M.T., Pakhomov, O. V, Semenov, A.A., Belyavskiy, P.Y., Ustinov, A.B. (2018). Investigation of the electrocaloric effect in strontium barium niobate (SBN) ceramics with rare-earth dopants, in: *Journal of Physics: Conference Series*. pp. 1–5.
- Feng, W. Bin, Zhu, X.L., Lu, X.Q., Chen, X.M. (2017). Crystal structure, ferroelectricity and polar order in $\text{Ba}_4\text{R}_2\text{Zr}_4\text{Nb}_6\text{O}_{30}$ (R=La, Nd, Sm) tetragonal Tungsten Bronze new system. *J. Mater. Chem. C* 5, 4009–4016.

- Fortin, W., Kugel, G.E., Rytz, D. (1997). Ferroelectrics Second harmonic generation (SHG) in $K_6Li_4Nb_{10}O_{30}$ (KLN) and effect of non- stoichiometry. *Ferroelectrics* 202, 183–191.
- Fu, B., Tang, G., Li, Y. (2017). Electron-phonon scattering effect on the lattice thermal conductivity of silicon nanostructure. *Phys. Chem. Chem. Phys.* 19, 28517-28526.
- Ge, W., Zhu, C., An, H., Li, Z., Tang, G., Hou, D. (2014). Sol – gel synthesis and dielectric properties of Ruddlesden – Popper phase $Sr_{n+1}Ti_nO_{3n+1}$ ($n = 1, 2, 3, \infty$). *Ceram. Int.* 40, 1569–1574.
- Ghorbani-moghadam, T., Kompany, A., Bagheri-mohagheghi, M.M., Abrishami, E.B. (2018). Cobalt spin states investigation of Ruddlesden-Popper $La_{2-x}Sr_xCoO_4$, using X-ray diffraction and infrared spectroscopy. *J. Magn. Magn. Mater.* 465, 768–774.
- Gilroy, K.S., Phillips, W.A. (2006). An asymmetric double-well potential model for structural relaxation processes in amorphous materials. *Philos. Mag. Part B* 43, 735–746.
- Goodenough, J.B., Ramsesha, S. (1982). Further evidence for the coexistence of localized and itinerant 3d electrons in La_2NiO_4 . *Mater. Res. Bull.* 17, 383–390.
- Goupil, F. Le, Axelsson, A., Valant, M., Lukasiewicz, T., Dec, J., Berenov, A., Alford, N.M. (2014a). Effect of Ce doping on the electrocaloric effect of $Sr_xBa_{1-x}Nb_2O_6$ single crystals. *Appl. Phys. Lett.* 104, 1–4.
- Goupil, F. Le, Axelsson, A.K., Dunne, L.J., Valant, M., Manos, G., Lukasiewicz, T., Dec, J., Berenov, A., Alford, N.M.N. (2014b). Anisotropy of the electrocaloric effect in lead-free relaxor ferroelectrics. *Adv. Energy Mater.* 4, 1–6.
- Green, M.A., Neumann, D.A. (2000). Synthesis, Structure, and Electronic Properties of $LaCa_2Mn_2O_7$. *Chem. Mater.* 12, 90–97.
- Gupta, S., Verma, M.K., Sharma, N.D., Singh, D. (2016a). Synthesis and characterization of mixed valent Fe containing K_2NiF_4 -type phases. *Polyhedron* 122, 79–85.
- Gupta, S., Verma, M.K., Singh, D. (2016b). Effect of A cation size on structural, magnetic and electrical properties of K_2NiF_4 -type oxide $LaSrFeO_4$. *Ceram. Int.* 42, 18418–18424.
- Guvenc, C.M., Adem, U. (2019). Influence of aging on electrocaloric effect in Li^+ doped $BaTiO_3$ ceramics. *J. Alloys Compd.* 791, 674–680.
- Han, X., Wei, L., Yang, Z., Zhang, T. (2013). Phase formation, dielectric and ferroelectric properties of $Ca_xBa_{1-x}Nb_2O_6$ ceramics. *Ceram. Int.* 39, 4853–4860.
- Han, Y., Hu, J., Yin, C., Zhang, Y., Xie, J., Yin, D., Li, C. (2016). Iron-Based Fluorides of Tetragonal Tungsten Bronze Structure as Potential Cathodes for Na-Ion Batteries. *J. Mater. Chem. A* 4, 7382–7389.

- Herrero-mart, J., Blasco, J., Garcia, J., Subias, G., Mazzoli, C. (2011). Structural changes at the semiconductor-insulator phase transition in the single-layered perovskite $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$. *Phys. Rev. B* 83, 1–13.
- Hildenbrand, N., Nammensma, P., Blank, D.H.A., Bouwmeester, H.J.M., Boukamp, B.A. (2013). Influence of configuration and microstructure on performance of $\text{La}_2\text{NiO}_{4+\delta}$ d intermediate-temperature solid oxide fuel cells cathodes. *J. Power Sources* 238, 442–453.
- Hojamberdiev, M., Kawashima, K., Kumar, M., Yamakata, A., Yubuta, K., Gurlo, A., Hasegawa, M., Domen, K., Teshima, K. (2017). Engaging the flux-grown $\text{La}_{1-x}\text{Sr}_x\text{Fe}_{1-y}\text{Ti}_y\text{O}_3$ crystals in visible-light-driven photocatalytic hydrogen generation. *Int. J. Hydrogen Energy* 42, 27024–27033.
- Hou, Q., Yan, K., Fan, R., Zhang, Z., Chen, M., Sun, K., Cheng, C. (2015). Experimental Realization of Tunable Negative Permittivity in Percolative $\text{Fe}_7\text{Si}_9\text{B}_{13}$ /epoxy Composites. *RSC Adv.* 5, 9472–9475.
- Hu, C., Hou, L., Fang, L., Liu, L. (2013). Preparation and dielectric properties of unfilled tungsten bronze ferroelectrics $\text{Ba}_4\text{RETiNb}_9\text{O}_{30}$. *J. Alloys Compd.* 581, 547–552.
- Huang, C.J., Li, K., Liu, X.Q., Zhu, X.L., Chen, X.M. (2014). Effects of A1/A2-sites occupancy upon ferroelectric transition in $(\text{Sr}_x\text{Ba}_{1-x})\text{Nb}_2\text{O}_6$ tungsten bronze ceramics. *J. Am. Ceram. Soc.* 97, 507–512.
- Huang, C.J., Li, K., Wu, S.Y., Zhu, X.L., Chen, X.M., 2015. Variation of ferroelectric hysteresis loop with temperature in $(\text{Sr}_x\text{Ba}_{1-x})\text{Nb}_2\text{O}_6$ unfilled tungsten bronze ceramics. *J. Mater.* 1, 146–152.
- Huang, S., Shi, L., Tian, Z., Yuan, S., Wang, L., Gong, G., Yin, C., Zehirun, G. (2015). High-temperature colossal dielectric response in RFeO_3 (R = La, Pr and Sm) ceramics. *Ceram. Int.* 41, 691–698.
- Ivanova, Y.A., Sutormina, E.F., Rudina, N.A., Nartova, A. V, Isupova, L.A. (2018). Effect of preparation route on Sr_2TiO_4 catalyst for the oxidative coupling of methane. *Catal. Commun.* 117, 43–48.
- Jennings, A.J., Skinner, S.J. (2002). Thermal stability and conduction properties of the $\text{La}_x\text{Sr}_{2-x}\text{FeO}_{4+\delta}$ system. *solid state ionics* 152–153, 663–667.
- Jennings, A.J., Skinner, S.J., Helgason, O. (2004). $\text{La}_x\text{Sr}_{2-x}\text{Fe}_y\text{Ru}_{1-y}\text{O}_{4+\delta}$: a new family of K_2NiF_4 type oxides. *J. Solid State Chem.* 177, 45–54.
- Jennings, A.J., Skinner, S.J., Helgason, O. (2003). Structural properties of $\text{La}_x\text{Sr}_{2-x}\text{FeO}_{4+\delta}$ at high temperature and under reducing conditions. *J. Solid State Chem.* 175, 207–217.
- Jindal, S., Vasishth, A., Devi, S., Anand, G. (2018). A review on tungsten bronze ferroelectric ceramics as electrically tunable devices. *Integr. Ferroelectr.* 186.
- Jun, Y., Moon, W., Chang, C., Kim, H., Ryu, H.S., Kim, J.W., Kim, K.H., Hong, S. (2005). Effects of Nb-doping on electric and magnetic properties in multi-ferroic BiFeO_3 ceramics. *Solid State Commun.* 135, 133–137.

- Jun, Y.K., Hong, S.H. (2007). Dielectric and magnetic properties in Co- and Nb-substituted BiFeO₃ ceramics. *Solid State Commun.* 144, 329–333.
- Kamran, M., Ullah, A., Rahman, S., Tahir, A., Nadeem, K., Anis, M., Hussain, S. (2017). Structural, magnetic, and dielectric properties of multiferroic Co_{1-x}Mg_xCr₂O₄ nanoparticles. *J. Magn. Magn. Mater.* 433, 178–186.
- Khadhraoui, S., Triki, A., Hcini, S., Zemni, S., Oumezzine, M. (2014). Variable-range-hopping conduction and dielectric relaxation in Pr_{0.6}Sr_{0.4}Mn_{0.6}Ti_{0.4}O_{3±δ} perovskite. *J. Magn. Magn. Mater.* 371, 69–76.
- Kim, M., Lee, J.-H., Kim, J.-J., Lee, H.Y., Cho, S.-H. (2002). Origin of Abnormal Grain Growth in Tungsten Bronze Structured Ferroelectric Sr_xBa_{1-x}Nb₂O₆ Ceramics. *Jpn. J. Appl. Phys.* 41, 7048–7052.
- Kimura, T., Miyamoto, S., Yamaguchi, T. (1990). Microstructure Development and Dielectric Properties of Potassium Strontium Niobate Ceramics. *J. Am. Ceram. Soc.* 73, 127–130.
- Klande, T., Efimov, K., Cusenza, S., Becker, K., Feldhoff, A. (2011). Effect of doping, microstructure, and CO₂ on La₂NiO_{4+δ}-based oxygen-transporting materials. *J. Solid State Chem.* 184, 3310–3318.
- Kulkarni, A.R., Patro, P.K. (2010). Lead Free Strontium Barium Niobate Ferroelectric Ceramics—A Review on Synthesis, Microstructure and Dielectric Properties. *Trans. Indian Ceram. Soc.* 69, 135–146.
- Kumar, A., Sati, A., Mishra, V., Warshi, M.K., Kumar, R., Sagdeo, P.R. (2019). Charge neutral crystal field transitions: A measure of electron–phonon interaction. *J. Phys. Chem. Solids* 135, 109102.
- Kumar, R., Singh, S. (2018). Enhanced electrocaloric response and high energy-storage properties in lead-free (1-x)(K_{0.5}Na_{0.5})NbO_{3-x}SrZrO₃ nanocrystalline ceramics. *J. Alloys Compd.* 764, 289–294.
- Kutnjak, Z., Rozic, B., Pirc, R., 2015. *Electrocaloric Effect: Theory, Measurements, And Applications*, Wiley Encyclopedia of Electrical and Electronics Engineering.
- Kutnjak, Z., Vodopivec, B., Blinc, R. (2008). Anisotropy of electric field freezing of the relaxor ferroelectric Pb(Mg_{1/3}Nb_{2/3})O₃. *Phys. Rev. B* 77, 1–5.
- Lang, X., Mo, H., Hu, X., Tian, H. (2017). Suoercapacitor performance of perovskite La_{1-x}Sr_xMnO₃. *Dalt. Trans.* 46, 13720–13730.
- Le Goupil, F., Axelsson, A.-K., Valant, M., Lukasiewicz, T., Dec, J., Berenov, A., Alford, N.M. (2014). Effect of Ce doping on the electrocaloric effect of Sr_xBa_{1-x}Nb₂O₆ single crystals. *Appl. Phys. Lett.* 104, 222911.

- Lee, C., Orloff, N.D., Birol, T., Zhu, Y., Goian, V., Rocas, E., Haislmaier, R., Vlahos, E., Mundy, J.A., Kourkoutis, L.F., Nie, Y., Biegalski, M.D., Zhang, J., Bernhagen, M., Benedek, N.A., Kim, Y., Brock, J.D., Uecker, R., Xi, X.X., Gopalan, V., Nuzhnyy, D., Kamba, S., Muller, D.A., Takeuchi, I., Booth, J.C., Fennie, C.J., Schlom, D.G. (2013). Exploiting dimensionality and defect mitigation to create tunable microwave dielectrics. *Nature* 502, 532–536.
- Lee, H., Freer, R. (1998). Abnormal grain growth and liquid-phase sintering in $\text{Sr}_{0.6}\text{Ba}_{0.4}\text{Nb}_2\text{O}_6$. *J. Mater. Sci.* 33, 1703–1708.
- Lee, H., Freer, R., 1996. The mechanism of abnormal grain growth in $\text{Sr}_{0.6}\text{Ba}_{0.4}\text{Nb}_2\text{O}_6$ ceramics. *J. Appl. Phys.* 81, 376–382.
- Lee, H., Vashaee, D., Wang, D.Z., Dresselhaus, M.S., Ren, Z.F., Chen, G. (2010). Effects of nanoscale porosity on thermoelectric properties of SiGe. *J. Appl. Phys.* 107, 1–7.
- Lee, K.H., Kim, S.W., Ohta, H., Koumoto, K., 2007. Thermoelectric properties of layered perovskite-type $(\text{Sr}_{1-x}\text{Ca}_x)_3(\text{Ti}_{1-y}\text{Nb}_y)_2\text{O}_7$. *J. Appl. Phys.* 101, 1–6.
- Lee, K.H., Kim, S.W., Ohta, H., Koumoto, K. (2006). Ruddlesden-Popper phases as thermoelectric oxides: Nb-doped $\text{SrO}(\text{SrTiO}_3)_n$ ($n = 1, 2$). *J. Appl. Phys.* 100, 1–7.
- Li, J., Pu, Y., Wang, Z., Dai, J. (2013). A comparative study of $\text{Sr}_{0.7}\text{Ba}_{0.3}\text{Nb}_2\text{O}_6$ relaxor ferroelectric ceramics prepared by conventional and microwave sintering techniques. *Ceram. Int.* 39, 5069–5075.
- Li, J., Zhang, D., Qin, S., Li, T., Wu, M., Wang, D., Bai, Y., Lou, X. (2016). Large room-temperature electrocaloric effect in lead-free $\text{BaHf}_x\text{Ti}_{1-x}\text{O}_3$ ceramics under low electric field. *Acta Mater.* 115, 58–67.
- Li, L., Zhu, M., Ren, X., Wei, Q., Zheng, M., Hou, Y. (2017). Lead-free $\text{Bi}(\text{Mg}_{0.5}\text{Ti}_{0.5})\text{O}_3$ -modified $0.875\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$ - 0.125BaTiO_3 ferroelectric ceramics with tetragonal structure and large field-induced strains. *AIP Adv.* 7, 1–9.
- Li, W., Zhou, D., Pang, L. (2017). Enhanced energy storage density by inducing defect dipoles in lead free relaxor ferroelectric BaTiO_3 -based ceramics. *Appl. Phys. Lett.* 110, 1–5.
- Liu, H., Yang, X. (2017). A brief review on perovskite multiferroics. *Ferroelectrics* 507, 69–85.
- Liu, L., Gao, F. (2015). A duplex structure in dense $\text{KSr}_2\text{Nb}_5\text{O}_{15}$ ferroelectric ceramics. *Ferroelectrics* 474, 99–104.
- Liu, S., Shen, B., Hao, H., Zhai, J. (2019). Glass-ceramic dielectric materials with high energy density and ultra-fast discharge speed for high power energy storage applications. *J. Mater. Chem. C* 7, 15118–15135.
- Liu, Y., Scott, J.F., Dkhil, B. (2016). Direct and indirect measurements on electrocaloric effect: Recent developments and perspectives. *Appl. Phys. Rev.* 3, 1–18.

- Liu, Y.K., Wong, H.F., Lam, K.K., Mak, C.L., Leung, C.W. (2019). Tuning ferromagnetic properties of LaMnO₃ films by oxygen vacancies and strain. *J. Magn. Mater.* 481, 85–92.
- Lu, L., Lv, M., Wang, D., Liu, G., Xu, X. (2017). Efficient photocatalytic hydrogen production over solid solutions Sr_{1-x}Bi_xTi_{1-x}Fe_xO₃ (0 ≤ x ≤ 0.5). *Appl. Catal. B Environ.* 200, 412–419.
- Luo, Z., Zhang, D., Liu, Y., Zhou, D., Yao, Y., Liu, C., Dkhil, B., Ren, X., Lou, X. (2014). Enhanced electrocaloric effect in lead-free BaTi_{1-x}Sn_xO₃ ceramics near room temperature. *Appl. Phys. Lett.* 105, 1–5.
- Ma, Y., Chen, X.M., Lin, Y.Q. (2008). Relaxorlike dielectric behavior and weak ferromagnetism in YFeO₃ ceramics. *J. Appl. Phys.* 103, 1–6.
- Maček, M., Orel, B. (1998). Electrochromism of sol-gel derived niobium oxide films. *Sol. Energy Mater. Sol. Cells* 54, 121–130.
- Majumder, S.B., Bhattacharyya, S., Katiyar, R.S., Manivannan, A., Dutta, P., Sheehra, M.S. (2006). Dielectric and magnetic properties of sol-gel-derived lead iron niobate ceramics. *J. Appl. Phys.* 99, 1–9.
- Marezio, M., Dernier, P.D. (1971). The bond lengths in LaFeO₃. *Mater. Res. Bull.* 6, 23–29.
- Milton, F.P., Londono, F.A., Botero, E.R., Eiras, J.A., Garcia, D. (2015). Thermal Behavior of Electrically Induced Birefringence of La-Doped PMN-PT Ceramics. *Integr. Ferroelectr.* 166, 180–185.
- Montazer, M., Harifi, T. (2018). Magnetic nanofinishes for textiles, in: *Ferrimagnetism*. pp. 225–240.
- Mudinepalli, V.R., Feng, L., Lin, W.C., Murty, B.S. (2015). Effect of grain size on dielectric and ferroelectric properties of nanostructured Ba_{0.8}Sr_{0.2}TiO₃ ceramics. *J. Adv. Ceram.* 4, 46–53.
- Mulder, A.T., Benedek, N.A., Rondinelli, J.M., Fennie, C.J. (2013). Turning ABO₃ Antiferroelectrics into Ferroelectrics: Design Rules for Practical Rotation-Driven Ferroelectricity in Double Perovskites and A₃B₂O₇ Ruddlesden-Popper Compounds. *Adv. Funct. Mater.* 23, 1–11.
- Muta, H., Kurosaki, K., Yamanaka, S. (2003). Thermoelectric properties of rare earth doped SrTiO₃. *J. Alloys Compd.* 350, 292–295.
- Nakano, H., Ishizawa, N., Kamegashira, N., Zuhadjri, Shishido, T. (2006). Electron microscopic study on SrGdMnO₄. *J. Alloys Compd.* 408–412, 593–597.
- Nawar, A.M., Abd El-Khalek, H.M., El-Nahass, M.M. (2015). Organo Opto-Electronics Dielectric and Electric Modulus Studies on Ni (II) Tetraphenyl Porphyrin Thin Films. *Org. Opto-Elect* 1, 25.

- Neurgaonkar, R.R., Hall, W.F., Oliver, J.R., Ho, W.W., Cory, W.K. (1988). Tungsten bronze $\text{Sr}_{1-x}\text{Ba}_x\text{Nb}_2\text{O}_6$: A case history of versatility. *Ferroelectrics* 87, 167–179.
- Nirala, G., Yadav, D., Upadhyay, S. (2020). Ruddlesden–Popper phase A_2BO_4 oxides: Recent studies on structure, electrical, dielectric, and optical properties. *J. Advaced Ceram.* 9, 129–148.
- Nowroozi, M.A., Ivlev, S., Rohrer, J., Clemens, O. (2017). La_2CoO_4 : a new intercalation based cathode material for fluoride ion batteries with improved cycling stability. *J. Mater. Chem. A* 6, 4658–4669.
- Olsen, G.H., Aschauer, U., Spaldin, N.A., Selbach, S.M., Grande, T. (2016). Origin of ferroelectric polarization in tetragonal tungsten-bronze-type oxides. *Phys. Rev. B* 93, 1–5.
- Omata, T., Ueda, K., Ueda, N., Katada, M., Fujitsu, S., Hashimoto, T. (1993). preparation of oxygen excess $\text{SrLaFeO}_{4+\delta}$ and its electrical and magnetic properties. *Solid State Commun.* 88, 807–811.
- Oral, A.Y., Mecartney, M.L. (2001). Properties of sol-gel derived strontium barium niobate ceramics and the effect of V_2O_5 additive. *J. Mater. Sci.* 36, 5519–5527.
- Patro, P.K., Kulkarni, A.R., Gupta, S.M., Harendranath, C.S. (2007). Improved microstructure, dielectric and ferroelectric properties of microwave-sintered $\text{Sr}_{0.5}\text{Ba}_{0.5}\text{Nb}_2\text{O}_6$. *Phys. B Condens. Matter* 400, 237–242.
- Peng, D., Zou, H., Xu, C., Wang, X., Yao, X. (2013). Er doped $\text{BaBi}_4\text{Ti}_4\text{O}_{15}$ multifunctional ferroelectrics: Up-conversion photoluminescence, dielectric and ferroelectric properties. *J. Alloys Compd.* 552, 463–468.
- Pierre, J.L., Gautier-Luneau, I. (2000). Iron and citric acid: A fuzzy chemistry of ubiquitous biological relevance. *BioMetals* 13, 91–96.
- Prasad, B.V., Narsinga Rao, G., Chen, J.W., Suresh Babu, D. (2011). Abnormal high dielectric constant in SmFeO_3 semiconductor ceramics. *Mater. Res. Bull.* 46, 1670–1673.
- Qarony, W., Hossain, M.I., Salleo, A., Knipp, D., Hong, Y. (2019). Rough versus planar interfaces: How to maximize the short circuit current of perovskite single and tandem solar cells. *Mater. Today Energy* 11, 106–113.
- Raevski, I.P., Prosandeev, S.A., Bogatin, A.S., Malitskaya, M.A., Jastrabik, L. (2003). High dielectric permittivity in $\text{AFe}_{1/2}\text{B}_{1/2}\text{O}_3$ nonferroelectric perovskite ceramics (A=Ba, Sr, Ca; B=Nb, Ta, Sb). *J. Appl. Phys.* 93, 4130–4136.
- Reshak, A.H. (2015). Thermoelectric properties of $\text{Sr}_{n+1}\text{Ti}_n\text{O}_{3n+1}$ (n=1, 2, 3, ∞) Ruddlesden–Popper Homologous Series. *Renew. Energy* 76, 36–44.

- Rie, N., Yuta, N., Mario, O., Hiroki, W., Ryoua, N., Mitsuru, A., Hideki, K., Takeharu, S., Eiji, I., Hiroshi, K., Kumigashira, Enju, S., S, T. (2020). Electronic Structure of $\text{Sr}_3\text{Fe}_{2-x}\text{Co}_x\text{O}_{7-\delta}$ Studied by Photoemission and X-ray Absorption Spectroscopy, in: Proc. Int. Conf. Strongly Correlated Electron Systems (SCES2019). pp. 1–6.
- Roy, A., Prasad, K., Prasad, A. (2013). Piezoelectric, impedance, electric modulus and AC conductivity studies on $(\text{Bi}_{0.5}\text{Na}_{0.5})_{0.95}\text{Ba}_{0.05}\text{TiO}_3$ ceramic. *Process. Appl. Ceram.* 7, 81–91.
- Sasikala, C., Durairaj, N., Baskaran, I., Sathyaseelan, B., Henini, M., Manikandan, E. (2017). Transition metal titanium (Ti) doped LaFeO_3 nanoparticles for enhanced optical structural and magnetic properties. *J. Alloys Compd.* 712, 870–877.
- Sati, P.C., Arora, M., Chauhan, S., Chhoker, S., Kumar, M. (2012). Structural, magnetic, and optical properties of Pr and Zr codoped BiFeO_3 multiferroic ceramics. *J. Appl. Phys.* 112, 1–6.
- Saxena, M., Maiti, T. (2017). Effect of Ba-doping on high temperature thermoelectric properties of $\text{Sr}_2\text{TiMoO}_6$ double perovskites. *J. Alloys Compd.* 710, 472–478.
- Schaak, R.E., Mallouk, T.E. (2000). Topochemical Synthesis of Three-Dimensional Perovskites from Lamellar Precursors. *J. Am. Chem. Soc.* 122, 2798–2803.
- Scott, J.F. (2011). Electrocaloric Materials. *Annu. Rev.* 41, 229–242.
- Sharma, I.B., Kumari, S., Gupta, S. (2005). Synthesis, structure, electric transport and magnetic properties of $\text{Sr}_3\text{Fe}_{2-x}\text{Nb}_x\text{O}_7$ ($x = 0.3, 0.6$ and 1.0). *J. Alloys Compd.* 402, 12–16.
- Shi, C., Hu, Z., Hao, Y. (2011). Structural, magnetic and dielectric properties of $\text{La}_{2-x}\text{Ca}_x\text{NiO}_{4+\delta}$ ($x = 0, 0.1, 0.2, 0.3$). *J. Alloys Compd.* 509, 1333–1337.
- Shimizu, K., Itoh, S., Hatamachi, T., Kodama, T., Sato, M., Toda, K. (2005). Photocatalytic Water Splitting on Ni-Intercalated Ruddlesden-Popper Tantalate $\text{H}_2\text{La}_{2/3}\text{Ta}_2\text{O}_7$. *Chem. Mater.* 17, 5161–5166.
- Shin, J.H., Song, M.S., Lee, J.Y., 2006. Structure and magnetic properties of R-P phase $\text{Sr}_3\text{Mn}_{2-x}\text{Fe}_x\text{O}_{7-\delta}$ ($0.10 \leq x \leq 0.5$). *J Electroceram* 17, 205–209.
- Simon, A., Ravez, J. (2006). *Solid-state* chemistry and non-linear properties of tetragonal tungsten bronzes materials. *Comptes Rendus Chim.* 9, 1268–1276.
- Singh, A., Narang, S.B., Singh, K., Sharma, P., Pandey, O.P. (2006). Structural, AC conductivity and dielectric properties of Sr-La hexaferrite. *Eur. Phys. Journal Applied Phys.* 33, 189–193.
- Singh, D., Singh, S., Mahajan, A., Choudhary, N. (2014). Effect of substitution of magnetic rare earth Nd at non-magnetic La site on structure and properties of LaSrFeO_4 . *Ceram. Int.* 40, 1183–1188.

- Singh, H., Yadav, K.L. (2012). Effect of Nb substitution on the structural, dielectric and magnetic properties of multiferroic $\text{BiFe}_{1-x}\text{Nb}_x\text{O}_3$ ceramics. *Mater. Chem. Phys.* 132, 17–21.
- Soubeyroux, J.L., Courbin, P., Fournes, L., Fruchart, D., Le Flem, G. (1980). La phase SrLaFeO_4 : Structures cristalline et magnétique. *J. Solid State Chem.* 31, 313–320.
- Su, J., Zhang, J. (2019). Recent development on modification of synthesized barium titanate (BaTiO_3) and polymer/ BaTiO_3 dielectric composites. *J. Mater. Sci. Mater. Electron.* 30, 1957–1975.
- Sun, R.R., Liu, L.N., Guo, G.L., Zhang, J., Zhang, Y.S., Tang, C.J., Su, J.F., Zhang, D.M., An, X.Y. (2016). Fabrication and Thermoelectric Properties of n-Type Ruddlesden-Popper Phase $\text{Sr}_3(\text{Ti}_{1-x}\text{Ta}_x)_2\text{O}_7$ Oxides. *ECS J. Solid State Sci. Technol.* 5, 151–154.
- Sun, X., Xie, Y., Wu, F., Chen, H., Lv, M., Ni, S., Liu, G., Xu, X. (2015). Photocatalytic Hydrogen Production over Chromium Doped Layered Perovskite Sr_2TiO_4 . *Inorg. Chem.* 54, 7445–7453.
- Suresh, P., Srinath, S. (2015). Effect of synthesis route on the multiferroic properties of BiFeO_3 : A comparative study between solid state and sol-gel methods. *J. Alloys Compd.* 649, 843–850.
- Surmin, A., Fertey, P., Schaniel, D., Woike, T. (2006). Modulated structure of potassium sodium strontium barium niobates (KNSBN): Harmonic solution. *Acta Crystallogr. Sect. B Struct. Sci.* B62, 228–235.
- Suter, A., Logvenov, G., Boris, A. V., Baiutti, F., Wrobel, F., Howald, L., Stilp, E., Salman, Z., Prokscha, T., Keimer, B. (2018). Superconductivity drives magnetism in δ -doped La_2CuO_4 . *Phys. Rev. B* 97, 1–11.
- Taguchi, H. (2001). Metal - insulator transition in orthorhombic perovskite-type $\text{Ca}(\text{Mn}_{1-x}\text{Nb}_x)\text{O}_3$. *Phys. B Condens. Matter* 304, 38–44.
- Tahara, S., Ichikawa, T., Kajiwara, G., Sugahara, Y. (2007). Reactivity of the Ruddlesden-Popper Phase $\text{H}_2\text{La}_2\text{Ti}_3\text{O}_{10}$ with Organic Compounds: Intercalation and Grafting Reactions. *Chem. Mater.* 19, 2352–2358.
- Tang, H., Tang, X.-G., Li, M.-D., Liu, Q.-X., Jiang, Y.-P. (2019a). Pyroelectric energy harvesting capabilities and electrocaloric effect in lead-free $\text{Sr}_x\text{Ba}_{1-x}\text{Nb}_2\text{O}_6$ ferroelectric ceramics. *J. Alloys Compd.* 791, 1038–1045.
- Tang, H., Tang, X., Li, M., Liu, Q., Jiang, Y. (2019b). Pyroelectric energy harvesting capabilities and electrocaloric effect in lead-free $\text{Sr}_x\text{Ba}_{1-x}\text{Nb}_2\text{O}_6$ ferroelectric ceramics. *J. Alloys Compd.* 791, 1038–1045.
- Tezuka, K., Inamura, M., Hinatsu, Y. (1999). Crystal Structures and Magnetic Properties of $\text{Ca}_{2+x}\text{Sr}_x\text{MnO}_4$. *J. Solid State Chem.* 145, 705–710.
- Thakur, V., Singh, A., Awasthi, A.M., Singh, L. (2015). Temperature dependent electrical transport characteristics of BaTiO_3 modified lithium borate glasses. *AIP Adv.* 5, 1–11.

- Tremblay, M.-H., Basca, J., Zhao, B., Pulvirenti, F., Barlow, S., Marder, S.R. (2019). Structure of (4-Y-C₆H₄CH₂NH₃)₂PbI₄ {Y = H, F, Cl, Br, I}: Tuning of Hybrid Organic Inorganic Perovskite Structures from Ruddlesden-Popper to Dion-Jacobson Limits. *Chem. Mater.* 31, 6145–6153.
- Tsai, H., Nie, W., Blancon, J., Stoumpos, C.C., Asadpour, R., Harutyunyan, B., Neukirch, A.J., Verduzco, R., Crochet, J.J., Tretiak, S., Pedesseau, L., Even, J., Alam, M.A., Gupta, G., Lou, J., Ajayan, P.M., Bedzyk, M.J., Kanatzidis, M.G., Mohite, A.D. (2016). High-efficiency two-dimensional Ruddlesden–Popper perovskite solar cells. *Nature* 536, 312–316.
- Tugova, E.A., Popova, V.F., Zvereva, I.A., Gusarov, V. V. (2006). Phase Diagram of the LaFeO₃–LaSrFeO₄ System. *Glas. Phys. Chem.* 32, 674–676.
- Vasala, S., Jakob, A., Wissel, K., Waidha, A.I., Alff, L., Clemens, O. (2019). Reversible Tuning of Magnetization in a Ferromagnetic Ruddlesden – Popper-Type Manganite by Electrochemical. *Adv. Electron. Mater.* 6, 1–9.
- Venkatesan, N.R., Labram, J.G., Chabinyk, M.L. (2018). Charge-Carrier Dynamics and Crystalline Texture of Layered Ruddlesden – Popper Hybrid Lead Iodide Perovskite Thin Films. *ACS Energy Lett.* 3, 380–386.
- Wakiya, N., Wang, J., Saiki, A., Shinozaki, K., Mizutani, N. (1999). Synthesis and Dielectric Properties of Ba_{1-x}R_{2x/3}Nb₂O₆ (R: Rare Earth) with Tetragonal Tungsten Bronze Structure. *J. Eur. Ceram. Soc.* 19, 1071–1075.
- Wang, J., Chen, Z., Huang, H., Cui, J., Zhang, W., Fu, Z., Peng, R., Yan, W., Lu, Y. (2017). Realizing semiconductivity by a large bandgap tuning in Bi₄Ti₃O₁₂ via inserting La_{1-x}Sr_xMnO₃ perovskite layers. *Appl. Phys. Lett.* 110, 1–5.
- Wang, M., Gao, F., Xu, J., Zhang, C., Qin, M., Wang, L., Guo, Y. (2017). Microstructure and Properties of KSr₂Nb₅O₁₅ Ceramics with Excess K⁺. *J. Electron. Mater.* 46, 1720–1729.
- Wang, T., Xu, T., Gao, S., Song, S.-H. (2017a). Effect of Nd and Nb co-doping on the structural, magnetic and optical properties of multiferroic BiFeO₃ nanoparticles prepared by sol-gel method. *Ceram. Int.* 43, 4489–4495.
- Wang, T., Xu, T., Gao, S., Song, S.H. (2017b). Effect of Nd and Nb co-doping on the structural, magnetic and optical properties of multiferroic BiFeO₃ nanoparticles prepared by sol-gel method. *Ceram. Int.* 43, 4489–4495.
- Warshi, M.K., Kumar, A., Mishra, V., Sati, A., Sagdeo, A., Kumar, R., Sagdeo, P.R. (2019). Effect of self-doping on the charge state of Fe ions and crystal field transitions in YFeO₃: Experiments and theory. *J. Appl. Phys.* 125, 1–7.
- Woolley, R.J., Skinner, S.J. (2014). Functionally graded composite La₂NiO_{4+δ} and La₄Ni₃O_{10-δ} solid oxide fuel cell cathodes. *Solid State Ionics* 255, 1–5.
- Yang, B., Hao, S., Yang, P., Wei, L., Yang, Z. (2018). Relaxor behavior and energy storage density induced by B-sites substitutions in (Ca_{0.28}Ba_{0.72})_{2.1}Na_{0.8}Nb₅O₁₅. *Ceram. Int.* 44, 8832–8841.

- Yang, C., Li, J., Lin, Y., Liu, J., Chen, F., Liu, M. (2015). In situ fabrication of CoFe alloy nanoparticles structured $(\text{Pr}_{0.4}\text{Sr}_{0.6})_3(\text{Fe}_{0.85}\text{Nb}_{0.15})_2\text{O}_7$ ceramic anode for direct hydrocarbon solid oxide fuel cells. *Nano Energy* 11, 704–710.
- Yao, Y., Mak, C.L., Wong, K.H. (2009). Effects of Rare-Earth Dopants on the Ferroelectric and Pyroelectric Properties of Strontium Barium Niobate Ceramics. *Appl. Ceram. Technol.* 6, 671–678.
- Yao, Y.B., Mak, C.L., Ploss, B. (2012). Phase transitions and electrical characterizations of $(\text{K}_{0.5}\text{Na}_{0.5})_{2x}(\text{Sr}_{0.6}\text{Ba}_{0.4})_{5-x}\text{Nb}_{10}\text{O}_{30}$ (KNSBN) ceramics with “unfilled” and ‘filled’ tetragonal tungsten–bronze (TTB) crystal structure. *J. Eur. Ceram. Soc.* 32, 4353–4361.
- Zaman, A., Iqbal, Y., Hussain, A., Kim, M.H., Malik, R.A. (2014). Dielectric , ferroelectric, and field-induced strain properties of Ta-doped $0.99\text{Bi}_{0.5}(\text{Na}_{0.82}\text{K}_{0.18})_{0.5}\text{TiO}_3\text{-}0.01\text{LiSbO}_3$ ceramics. *J. Mater. Sci.* 49, 3205–3214.
- Zeb, A., Milne, S.J. (2015). High temperature dielectric ceramics : a review of temperature-stable high-permittivity perovskites. *J. Mater. Sci. Mater. Electron.* 26, 9243–9255.
- Zeng, Z., Xu, Y., Zhang, Z., Gao, Z., Luo, M., Yin, Z., Zhang, C., Xu, J., Huang, B., Luo, F., Du, Y., Yan, C. (2020). Rare-earth-containing perovskite nanomaterials: design, synthesis, properties and applications. *Chem. Soc. Rev.* 49, 1109–1143.
- Zhang, H., Haule, K., Vanderbilt, D. (2013). Effective $J = 1/2$ Insulating State in Ruddlesden-Popper Iridates : An LDA + DMFT Study. *Phys. Rev. Lett.* 111, 1–5.
- Zhang, H., Ni, S., Mi, Y., Xu, X. (2018). Ruddlesden-Popper compound Sr_2TiO_4 co-doped with La and Fe for efficient photocatalytic hydrogen production. *J. Catal.* 359, 112–121.
- Zhang, J., Wang, G., Gao, F., Mao, C., Cao, F., Dong, X. (2013). Influence of Sr/Ba ratio on the dielectric , ferroelectric and pyroelectric properties of strontium barium niobate ceramics. *Ceram. Int.* 39, 1971–1976.
- Zhang, L., Sun, B., Liu, Q., Ding, N., Yang, H., Wang, L., Zhang, Q. (2016). Novel layered perovskite $\text{Sr}_3\text{Ti}_2\text{O}_7$: Eu^{3+} phosphor with high-efficiency luminescence enhanced by charge compensation. *J. Alloys Compd.* 657, 27–31.
- Zhang, Z., Greenblatt, M., Goodenough, J.B. (1994). Synthesis, Structure, and properties of the layered perovskite $\text{La}_3\text{Ni}_2\text{O}_{7-\delta}$. *J. Solid State Chem.* 108, 402–409.
- Zhao, W., Pan, R., Xue, H. (2011). Synthesis of Plate-like SrTiO_3 Particles. *Mater. Sci. Forum* 663–665, 1024–1027.

- Zhong, H., Zeng, R. (2006). Structure of LaSrMO_4 ($M = \text{Mn}, \text{Fe}, \text{Co}, \text{Ni}, \text{Cu}$) and their catalytic properties in the total oxidation of hexane. *J. Serbian Chem. Soc.* 71, 1049–1059.
- Zhou, H., Wang, J., Liu, J., Jin, H., Zhang, J. (2013). Influence of Hydrothermal Synthesis Condition on Structure and Microwave Properties of $\text{Sr}_{n+1}\text{Ti}_n\text{O}_{3n+1}$ Ceramics. *Asian J. Chem.* 25, 1593–1596.
- Zhou, J.-S., Goodenough, J.B. (2000). pressure-induced phase segregation in single-crystal $\text{La}_{2-2x}\text{Sr}_{1+2x}\text{Mn}_2\text{O}_7$ ($x = 0.32$). *Phys. Rev. B* 61, 9217–9220.
- Zhou, M., Liang, R., Zhou, Z., Dong, X. (2019). Combining high energy efficiency and fast charge-discharge capability in novel BaTiO_3 -based relaxor ferroelectric ceramic for energy-storage. *Ceram. Int.* 45, 3582–3590.
- Zhu, X.L., Chen, X.M. (2010). Thermal hysteresis of ferroelectric transition in $\text{Sr}_4\text{R}_2\text{Ti}_4\text{Nb}_6\text{O}_{30}$ ($R = \text{Sm}$ and Eu) tetragonal tungsten bronzes Thermal hysteresis of ferroelectric transition in $\text{Sr}_4\text{R}_2\text{Ti}_4\text{Nb}_6\text{O}_{30}$ ($R = \text{Sm}$ and Eu) tetragonal tungsten bronzes. *Appl. Phys. Lett.* 96, 1–4.
- Zulhadjri, Prijamboedi, B., Nugroho, A.A., Mufti, N., Fajar, A., Palstra, T.T.M., Ismunandar. (2011). Aurivillius phases of $\text{PbBi}_4\text{Ti}_4\text{O}_{15}$ doped with Mn^{3+} synthesized by molten salt technique: Structure, dielectric, and magnetic properties. *J. Solid State Chem.* 184, 1318–1323.

