## **List of publications**

- Kaliammal, R., Parvathy, G., Maheshwaran, G., Sankaranarayanan, K., Arivanandhan, M. and Sudhahar, S., 2020. Crystal growth, structural, optical, thermal, and mechanical properties of new bis (2-amino-6-methyl pyridinium barbiturate) tetrahydrate organic single crystal for nonlinear optical applications. *Chinese Journal of Physics*, 68, pp.436-460.
- 2. Saranya, J., Sreeja, B.S., Padmalaya, G., Radha, S. and Arivanandan, M., 2020. Microwave Thermally Assisted Porous Structured Cerium Oxide/Zinc Oxide Design: Fabrication, Electrochemical Activity Towards Pb Ions, Anticancer Assessment in HeLa and VERO Cell Lines. *Journal of Inorganic and Organometallic Polymers and Materials*, pp.1-14.
- **3.** Rajasekaran, P., Kumaki, Y., Arivanandhan, M., Khaleeullah, M.M.S.I., Jayavel, R., Nakatsugawa, H., Hayakawa, Y. and Shimomura, M., 2020. Effect of Sb substitution on structural, morphological and electrical properties of BaSnO3 for thermoelectric application. *Physica B: Condensed Matter*, 597, p.412387
- **4.** Devi, N.Y., Vijayakumar, K., Rajasekaran, P., Nedunchezhian, A.A., Sidharth, D., Masaru, S., Arivanandhan, M. and Jayavel, R., 2020. Effect of Gd and Nb cosubstitution on enhancing the thermoelectric power factor of nanostructured SrTiO3. *Ceramics International*.
- **5.** Raja, A., Rajasekaran, P., Selvakumar, K., Arivanandhan, M., Bahadur, S.A. and Swaminathan, M., 2020. Rational fabrication of needle with spherical shape ternary reduced Graphene Oxide-HoVO4-TiO2 photocatalyst for degradation of ibuprofen under visible light. *Applied Surface Science*, *513*, p.145803.
- **6.** Parvathy, G., Kaliammal, R., Sankaranarayanan, K., Arivanandhan, M., Kumar, M.K. and Sudhahar, S., 2020. Growth, experimental and theoretical investigations on 4-hydroxy-3-methoxybenzaldehyde 5-chloro-2-hydroxybenzoic acid: A new high second order nonlinear optical material. *Journal of Molecular Structure*, p.128406.
- **7.** Ramadoss, N., Pazhanivel, K., Kumar, S.G., Arivanandhan, M. and Anandan, P., 2020. Effect of B 4 C and SiC nanoparticle reinforcement on the wear behavior and surface structure of aluminum (Al6063-T6) matrix composite. *SN Applied Sciences*, 2(5), pp.1-16.
- **8.** Rajkumar, R., Nedunchezhian, A.A., Sidharth, D., Rajasekaran, P., Arivanandhan, M., Jayavel, R. and Anbalagan, G., 2020. Effect of sintering temperatures on mixed phases

- and thermoelectric properties of nanostructured copper telluride. *Journal of Alloys and Compounds*, p.155276.
- **9.** Arunbalaji, S., Vasudevan, R., Arivanandhan, M., Alsalme, A., Alghamdi, A. and Jayavel, R., 2020. CuO/MoS2 nanocomposites for rapid and high sensitive non-enzymatic glucose sensors. *Ceramics International*.
- **10.** Raja, A., Rajasekaran, P., Selvakumar, K., Arivanandhan, M., Asath Bahadur, S. and Swaminathan, M., 2020. Efficient Photoreduction of Hexavalent Chromium Using the Reduced Graphene Oxide–Sm2MoO6–TiO2 Catalyst under Visible Light Illumination. *ACS omega*, 5(12), pp.6414-6422.
- **11.** Mohamed Ismail, M., Hemaanandhan, S., Mani, D., Arivanandhan, M., Anbalagan, G. and Jayavel, R., 2020. Facile preparation of Mn3O4/rGO hybrid nanocomposite by solgel in situ reduction method with enhanced energy storage performance for supercapacitor applications. *JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY*, 93(3), pp.703-713.
- **12.** Jayachandiran, J., Arivanandhan, M., Padmaraj, O., Jayavel, R. and Nedumaran, D., 2020. Investigation on ozone-sensing characteristics of surface sensitive hybrid rGO/WO 3 nanocomposite films at ambient temperature. *Advanced Composites and Hybrid Materials*, *3*(1), pp.16-30.
- **13.** Ismail, M.M., Hemaanandhan, S., Mani, D., Arivanandhan, M., Anbalagan, G. and Jayavel, R., 2020. Facile preparation of Mn 3 O 4/rGO hybrid nanocomposite by solgel in situ reduction method with enhanced energy storage performance for supercapacitor applications. *Journal of Sol-Gel Science and Technology*, 93(3), pp.703-713.
- **14.** Padmalaya, G., Sreeja, B.S., Shoba, S., Rajavel, R., Radha, S., Arivanandan, M. and Shrestha, S., 2020. Synthesis of micro-dumbbell shaped rGO/ZnO composite rods and its application towards as electrochemical sensor for the simultaneous determination of ammonia and formaldehyde using hexamine and its structural analysis. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(3), pp.943-954.
- **15.** Selvarajan, R., Vadivel, S., Arivanandhan, M. and Jayavel, R., 2020. Facile synthesis of pervoskite type BiYO3 embedded reduced graphene oxide (RGO) composite for supercapacitor applications. *Ceramics International*, 46(3), pp.3471-3478.
- **16.** Usharani, S., Judes, J., Natarajan, V., Arivanandhan, M., Anandan, P., Vorontsov, D.A. and Marychev, M.O., 2020. The effect of mixed solvents on solute-solvent interactions

- and bulk growth of 3, 4-diamino benzopheone: A novel benzophenone derivative for NLO applications. *Optical Materials*, *100*, p.109603.
- **17.** Devi, N.Y., Rajasekaran, P., Vijayakumar, K., Nedunchezhian, A.A., Sidharth, D., Anbalagan, G., Arivanandhan, M. and Jayavel, R., 2020. Enhancement of thermoelectric power factor of hydrothermally synthesised SrTiO3 nanostructures. *Materials Research Express*, 7(1), p.015094.
- **18.** Archana, T., Vijayakumar, K., Subashini, G., Grace, A.N., Arivanandhan, M. and Jayavel, R., 2020. Facile synthesis of CdS Quantum dots for QDSSC with high photo current density. *Materials Research Express*, 7(1), p.015528.
- **19.** Ismail, M.M., Vigneshwaran, J., Arunbalaji, S., Mani, D., Arivanandhan, M., Jose, S.P. and Jayavel, R., 2020. Antimonene nanosheets with enhanced electrochemical performance for energy storage applications. *Dalton Transactions*, *49*(39), pp.13717-13725.
- **20.** Rajasekaran, P., Arivanandhan, M., Kumaki, Y., Jayavel, R., Hayakawa, Y. and Shimomura, M., 2020. Facile synthesis of morphology-controlled La: BaSnO 3 for the enhancement of thermoelectric power factor. *CrystEngComm*, 22(32), pp.5363-5374.
- **21.** Arunbalaji, S., Ismail, M.M., Arivanandhan, M., Alsalme, A., Alghamdi, A. and Jayavel, R., 2020. High Sensitive Electrochemical nitrite sensor using Fe2O3/MoS2 nanocomposites synthesized by facile method. *Bulletin of the Chemical Society of Japan*.
- **22.** Mani, D., Mathivanan, D., Chang, H., Sakthivel, K., Elangovan, E., Sivakumar, T., Arivanandhan, M. and Jayavel, R., 2020. A facile synthesis of novel ε-Fe 2 O 3 grafted 2D h-BN nanostructures for enhanced visible active photocatalytic applications. *New Journal of Chemistry*, *44*(28), pp.12289-12298.
- **23.** Nagaraju, P., Arivanandhan, M., Alsalme, A., Alghamdi, A. and Jayavel, R., 2020. Enhanced electrochemical performance of α-MoO 3/graphene nanocomposites prepared by an in situ microwave irradiation technique for energy storage applications. *RSC Advances*, *10*(38), pp.22836-22847.
- **24.** Nedunchezhian, A.A., Sidharth, D., Rajkumar, R., Devi, N.Y., Maeda, K., Arivanandhan, M., Fujiwara, K., Anbalagan, G. and Jayavel, R., 2020. Enhancing the thermoelectric power factor of nanostructured ZnCo 2 O 4 by Bi substitution. *RSC Advances*, *10*(32), pp.18769-18775.
- **25.** Archana, T., Vijayakumar, K., Subashini, G., Grace, A.N., Arivanandhan, M. and Jayavel, R., 2020. Effect of co-sensitization of InSb quantum dots on enhancing the

- photoconversion efficiency of CdS based quantum dot sensitized solar cells. *RSC Advances*, 10(25), pp.14837-14845.
- **26.** Nagaraju, P., Vasudevan, R., Alsalme, A., Alghamdi, A., Arivanandhan, M. and Jayavel, R., 2020. Surfactant-Free Synthesis of Nb2O5 Nanoparticles Anchored Graphene Nanocomposites with Enhanced Electrochemical Performance for Supercapacitor Electrodes. *Nanomaterials*, *10*(1), p.160.
- **27.** Nagaraju, P., Vasudevan, R., Arivanandhan, M., Alsalme, A. and Jayavel, R., 2019. High-performance electrochemical capacitor based on cuprous oxide/graphene nanocomposite electrode material synthesized by microwave irradiation method. *Emergent Materials*, 2(4), pp.495-504.
- **28.** Archana, T., Vijayakumar, K., Arivanandhan, M. and Jayavel, R., 2019. TiO2 nanostructures with controlled morphology for improved electrical properties of photoanodes and quantum dot sensitized solar cell characteristics. *Surfaces and Interfaces*, *17*, p.100350.
- **29.** Kumaravel, S., Thiripuranthagan, S., Radhakrishnan, R., Erusappan, E., Durai, M., Devarajan, A. and Mukannan, A., 2019. Liquid phase esterification of levulinic acid into ethyl levulinate over sulphobenzylated nanoporous Al-SBA-15 catalyst. *Journal of nanoscience and nanotechnology*, *19*(11), pp.6965-6977.
- **30.** Dhanasekar, K., Sridaran, M., Arivanandhan, M. and Jayavel, R., 2019. A facile preparation, performance and emission analysis of pongamia oil-based novel biodiesel in diesel engine with CeO2: Gd nanoparticles. *Fuel*, 255, p.115756.
- 31. Sivaraj, M., Sudhakar, S., Arivanandhan, M., Ganesan, S. and Jayavel, R., 2019. Study on Photo-Catalytic and Antimicrobial Activity of Green Synthesized TiO 2 Nanoparticles Coated Vitrified Tiles. *Journal of Nanoscience and Technology*, pp.836-839.
- **32.** Saravanan, T., Anandan, P., Shanmugam, M., Azhagurajan, M., Ismail, M.M., Arivanandhan, M., Hayakawa, Y. and Jayavel, R., 2019. Facile synthesis of Yb 2 O 3–graphene nanocomposites for enhanced energy and environmental applications. *Polymer Bulletin*, pp.1-16.
- **33.** Krishnakumar, B., Kumar, S., Gil, J.M., Mani, D., Arivanandhan, M. and Sobral, A.J., 2019. Synthesis and characterization of g/Ni–SiO2 composite for enhanced hydrogen storage applications. *International Journal of Hydrogen Energy*, *44*(41), pp.23249-23256.

- **34.** Arivanandhan, M., Takakura, G., Sidharth, D., Kensaku, M., Shiga, K., Morito, H. and Fujiwara, K., 2019. Crystallization and re-melting of Si1-xGex alloy semiconductor during rapid cooling. *Journal of Alloys and Compounds*, 798, pp.493-499.
- **35.** Raja, A., Rajasekaran, P., Selvakumar, K., Arivanandhan, M. and Swaminathan, M., 2019. Green approach to the preparation of reduced graphene oxide for photocatalytic and supercapacitor application. *Optik*, *190*, pp.21-27.
- **36.** Uthayakumar, M., Jeyakumari, A.P., Dhandapani, A., Shinde, V. and Arivanandhan, M., 2019. Synthesis, experimental and computational spectroscopic investigations of third-order nonlinear optical material (E)-N'-(benzo [d][1, 3] dioxol-5-ylmethylene) benzohydrazide. *Journal of Physics D: Applied Physics*, 52(39), p.395102.
- **37.** Sridaran, M., Dhanasekar, K. and Arivanandhan, M., 2019. Synthesis and Characterization of Pure and Gd-Doped CeO 2 Nanoparticles. *Journal of Nanoscience and Technology*, pp.725-726.
- **38.** Suresh, S., Devi, S.R., Sornamurthy, B.M., Arivanandhan, M. and Kumar, R.M., 2019. Growth, structural and optical studies of a novel nonlinear optical material: p-Toluidinium L-Tartrate. *Optik*, *185*, pp.651-656.
- **39.** Muruguthiruvalluvan, T.M.V., Nedunchezhian, A.A., Natarajan, V., Chandramohan, R., Azhagurajan, M., Anandan, P. and Arivanandhan, M., 2019. A facile synthesis, structural, morphological and electrical characterizations of Zn1-xCoxO nanocrystals for thermoelectric applications. *Solid State Sciences*, *91*, pp.133-137.
- **40.** Padmalaya, G., Sreeja, B.S., Kumar, P.D., Radha, S., Poornima, V., Arivanandan, M., Shrestha, S. and Uma, T.S., 2019. A facile synthesis of cellulose acetate functionalized zinc oxide nanocomposite for electrochemical sensing of cadmium ions. *Journal of Inorganic and Organometallic Polymers and Materials*, 29(3), pp.989-999.
- **41.** Nedunchezhian, A.A., Sidharth, D., Devi, N.Y., Rajkumar, R., Rajasekaran, P., Arivanandhan, M., Anbalagan, G. and Jayavel, R., 2019. Effect of Bismuth substitution on the enhancement of thermoelectric power factor of nanostructured BixCo3-xO4. *Ceramics International*, *45*(6), pp.6782-6787.
- **42.** Yu, J., Inatomi, Y., Kumar, V.N., Hayakawa, Y., Okano, Y., Arivanandhan, M., Momose, Y., Pan, X., Liu, Y., Zhang, X. and Luo, X., 2019. Homogeneous InGaSb crystal grown under microgravity using Chinese recovery satellite SJ-10. *npj Microgravity*, *5*(1), pp.1-6.
- **43.** Sidharth, D., Nedunchezhian, A.A., Rajkumar, R., Devi, N.Y., Rajasekaran, P., Arivanandhan, M., Fujiwara, K., Anbalagan, G. and Jayavel, R., 2019. Enhancing

- effects of Te substitution on the thermoelectric power factor of nanostructured SnSe 1–x Te x. *Physical Chemistry Chemical Physics*, 21(28), pp.15725-15733.
- **44.** Gurunathan, P., Hari, S., Suseela, S.B., Sankararajan, R. and Mukannan, A., 2019. Production, characterization and effectiveness of cellulose acetate functionalized ZnO nanocomposite adsorbent for the removal of Se (VI) ions from aqueous media. *Environmental Science and Pollution Research*, 26(1), pp.528-543.
- **45.** Thiruvalluvan, T.M., Natarajan, V., Manimuthu, V., Valanarasu, S., Anandan, P. and Arivanandhan, M., 2018. Effects of Al composition on the secondary phase formation and thermoelectric properties of Zn1-xAlxO nanocrystals. *Journal of Physics and Chemistry of Solids*, *122*, pp.162-166.
- **46.** Thangappan, R., Arivanandhan, M., Kumar, R.D. and Jayavel, R., 2018. Facile synthesis of RuO2 nanoparticles anchored on graphene nanosheets for high performance composite electrode for supercapacitor applications. *Journal of Physics and Chemistry of Solids*, *121*, pp.339-349.
- **47.** Saravanan, T., Anandan, P., Shanmugam, M., Jayakumari, T., Arivanandhan, M., Azhagurajan, M., Hayakawa, Y. and Jayavel, R., 2018. Impact of graphene on the enhancement of electrochemical and photocatalytic performance of Gd2O3-Graphene nanocomposites. *Solid State Sciences*, *83*, pp.171-180.
- **48.** Jayachandiran, J., Yesuraj, J., Arivanandhan, M., Raja, A., Suthanthiraraj, S.A., Jayavel, R. and Nedumaran, D., 2018. Synthesis and electrochemical studies of rGO/ZnO nanocomposite for supercapacitor application. *Journal of Inorganic and Organometallic Polymers and Materials*, 28(5), pp.2046-2055.
- **49.** Kumar, V.N., Hayakawa, Y., Arivanandhan, M., Rajesh, G., Koyama, T., Momose, Y., Ozawa, T., Okano, Y. and Inatomi, Y., 2018. Orientation-dependent dissolution and growth kinetics of InxGa1– xSb by vertical gradient freezing method under microgravity. *Journal of Crystal Growth*, 496, pp.15-17.
- **50.** Chinnu, M.K., Anandan, P., Arivanandhan, M., Venkatesan, A., Kumar, R.M. and Jayavel, R., 2018. Effect of rare earth doping on the enhancement of photocatalytic performance of ceria nanocrystals under natural sunlight. *Journal of Materials Science: Materials in Electronics*, 29(11), pp.9564-9572.
- **51.** Karthick, N.A., Thangappan, R., Arivanandhan, M., Gnanamani, A. and Jayavel, R., 2018. A facile synthesis of ferrocene functionalized graphene oxide nanocomposite for electrochemical sensing of lead. *Journal of Inorganic and Organometallic Polymers and Materials*, 28(3), pp.1021-1028.

- **52.** Jayachandiran, J., Raja, A., Arivanandhan, M., Jayavel, R. and Nedumaran, D., 2018. A facile synthesis of hybrid nanocomposites of reduced graphene oxide/ZnO and its surface modification characteristics for ozone sensing. *Journal of Materials Science: Materials in Electronics*, 29(4), pp.3074-3086.
- **53.** Mani, D., Tsunoji, N., Yumauchi, Y., Arivanandhan, M., Jayavel, R. and Ide, Y., 2018. Templated synthesis of atomically thin platy hematite nanoparticles within a layered silicate exhibiting efficient photocatalytic activity. *Journal of Materials Chemistry A*, *6*(12), pp.5166-5171.
- **54.** Thangappan, R., Arivanandhan, M., Kalaiselvam, S., Jayavel, R. and Hayakawa, Y., 2018. Molybdenum oxide/graphene nanocomposite electrodes with enhanced capacitive performance for supercapacitor applications. *Journal of Inorganic and Organometallic Polymers and Materials*, 28(1), pp.50-62.
- **55.** Rajasekaran, P., Nedunchezhian, A.A., Devi, N.Y., Sidharth, D., Arivanandhan, M. and Jayavel, R., 2017. The effect of rare earth ions on structural, morphological and thermoelectric properties of nanostructured tin oxide based perovskite materials. *Materials Research Express*, *4*(11), p.115024.
- **56.** Padmalaya, G., Sreeja, B.S., Kumar, P.S. and Arivanandhan, M., 2017. Chitosan anchored zinc oxide nanocomposite as modified electrochemical sensor for the detection of Cd (II) ions. *Desalination Water Treat.*, *97*, pp.297-305.
- **57.** Chandrasekaran, P., Arivanandhan, M., Jayakumari, T. and Anandan, P., 2017. The impact of sintering temperature on structural, morphological and thermoelectric properties of zinc titanate nanocrystals. *Materials Research Express*, *4*(7), p.075036.
- **58.** Mahadevan, M., Arivanandhan, M., Elangovan, K., Anandan, P. and Ramachandran, K., 2017, July. Growth, optical, ICP and thermal studies of nonlinear optical single crystal: Sodium acid phthalate (NaAP). In *AIP Conference Proceedings* (Vol. 1859, No. 1, p. 020022). AIP Publishing LLC.
- **59.** Vadivel, M., Babu, R.R., Ramamurthi, K. and Arivanandhan, M., 2017. Effect of PVP concentrations on the structural, morphological, dielectric and magnetic properties of CoFe2O4 magnetic nanoparticles. *Nano-Structures & Nano-Objects*, *11*, pp.112-123.
- **60.** Mahadevan, M., Sankar, P.K., Vinitha, G., Arivanandhan, M., Ramachandran, K. and Anandan, P., 2017. Non linear optical studies on semiorganic single crystal: L-arginine 4-nitrophenalate 4-nitrophenol dihydrate (LAPP). *Optics & Laser Technology*, 92, pp.168-172.

- **61.** Vadivel, M., Babu, R.R., Selvakumar, P., Arivanandhan, M. and Ramamurthi, K., 2017. Structural, Dielectric and Magnetic Properties Nanoparticles of La Substituted CoFe2O4. Recent Trends in Materials Science and Applications: Nanomaterials, Crystal Growth, Thin films, Quantum Dots, & Spectroscopy (Proceedings ICRTMSA 2016), 189, p.179.
- **62.** Manimuthu, V., Omprakash, M., Arivanandhan, M., Salleh, F., Hayakawa, Y. and Ikeda, H., 2017. Phonon-Drag Contribution to Seebeck Coefficient in P-Type Si, Ge and Si 1-x Ge x. *IEICE Transactions on Electronics*, *100*(5), pp.482-485.
- **63.** Karthikeyan, R., Thangaraju, D., Prakash, N., Arivanandhan, M. and Hayakawa, Y., 2017. In situ Growth of Phase-Controlled Nickel Sulfide Nanostructures on Reduced Graphene Oxide Nanosheets: A Improved Cost-effective Catalyst for 4-Nitrophenol Reduction. *ChemistrySelect*, 2(6), pp.2187-2196.
- **64.** Vadivel, M., Babu, R.R., Ramamurthi, K. and Arivanandhan, M., 2017. Enhanced dielectric and magnetic properties of polystyrene added CoFe2O4 magnetic nanoparticles. *Journal of Physics and Chemistry of Solids*, 102, pp.1-11.
- **65.** Veerappan, M., Mukannan, A., Salleh, F., Shimura, Y., Hayakawa, Y. and Ikeda, H., 2017. Fabrication of high quality, thin Ge-on-insulator layers by direct wafer-bonding for nanostructured thermoelectric devices. *Semiconductor Science and Technology*, 32(3), p.035021.
- **66.** Vadivel, M., Arivanandhan, M. and Ramamurthi, K., 2017. Structural, Spectral, Morphological, Dielectric, Magnetic, and Optical Properties of La-Ni ions cosubstituted CoFe 2 O 4 Nanoparticles. *Journal of Superconductivity and Novel Magnetism*, 30(2), pp.441-453.
- 67. Hayakawa, Y., KUMAR, V.N., Arivanandhan, M., Rajesh, G., Koyama, T., Momose, Y., Sakata, K., Ozawa, T., Okano, Y. and Inatomi, Y., 2017. Effects of Gravity and Orientation the Growth of InGaSb Ternary Crystal on Alloy Semiconductors. International Journal of*Microgravity* Science and *Application*, *34*(1), p.340111.
- **68.** Vadivel, M., Babu, R.R., Selvakumar, P., Arivanandhan, M. and Ramamurthi, K., 2017. Structural, Dielectric and Magnetic Properties of La Substituted CoFe 2 O 4 Nanoparticles. In *Recent Trends in Materials Science and Applications* (pp. 179-193). Springer, Cham.
- **69.** Vadivel, M., Babu, R.R., Ramamurthi, K. and Arivanandhan, M., 2017. Erratum to'CTAB cationic surfactant assisted synthesis of CoFe2O4 magnetic

- nanoparticles' [Ceram. Int. 42 (2016) 19320–19328]. *Ceramics International*, 4(43), pp.3927-3928.
- **70.** Murugan, R., Vijayaprasath, G., Thangaraj, M., Mahalingam, T., Rajendran, S., Arivanandhan, M., Loganathan, A., Hayakawa, Y. and Ravi, G., 2017. Defect assisted room temperature ferromagnetism on rf sputtered Mn doped CeO2 thin films. *Ceramics International*, *43*(1), pp.399-406.
- **71.** Vadivel, M., Babu, R.R., Ramamurthi, K. and Arivanandhan, M., 2016. CTAB cationic surfactant assisted synthesis of CoFe2O4 magnetic nanoparticles. *Ceramics International*, 42(16), pp.19320-19328.
- **72.** Kumar, V.N., Arivanandan, M., Koyoma, T., Udono, H., Inatomi, Y. and Hayakawa, Y., 2016. Effects of varying indium composition on the thermoelectric properties of In x Ga 1– x Sb ternary alloys. *Applied Physics A*, *122*(10), p.885.
- **73.** Velusamy, P., Babu, R.R., Ramamurthi, K., Elangovan, E., Viegas, J., Dahlem, M.S. and Arivanandhan, M., 2016. Characterization of spray pyrolytically deposited high mobility praseodymium doped CdO thin films. *Ceramics International*, 42(11), pp.12675-12685.
- **74.** Usharani, S., Natarajan, V., Judes, J., Arivanandhan, M., Anandan, P. and Natarajan, S., 2016. Crystal growth, structural and optical properties of a novel benzophenone derivative: 2-Chloro 5-nitro benzophenone. *Optik*, *127*(15), pp.5887-5893.
- **75.** Manimuthu, V., Arivanandhan, M., Hayakawa, Y. and Ikeda, H., 2016. Reduction of the surface roughness of Ge-on-insulator layers up to sub-nanometer range by chemical mechanical polishing.
- **76.** Saravanan, T., Anandan, P., Azhagurajan, M., Arivanandhan, M., Pazhanivel, K., Hayakawa, Y. and Jayavel, R., 2016. Synthesis and characterization of Y2O3-reduced graphene oxide nanocomposites for photocatalytic applications. *Materials Research Express*, *3*(7), p.075502.
- 77. Kumar, V.N., Arivanandhan, M., Rajesh, G., Koyama, T., Momose, Y., Sakata, K., Ozawa, T., Okano, Y., Inatomi, Y. and Hayakawa, Y., 2016. Investigation of directionally solidified InGaSb ternary alloys from Ga and Sb faces of GaSb (111) under prolonged microgravity at the International Space Station. *npj Microgravity*, 2(1), pp.1-7.
- **78.** Kanchana, P., Radhakrishnan, S., Navaneethan, M., Arivanandhan, M., Hayakawa, Y. and Sekar, C., 2016. Electrochemical sensor based on fe doped hydroxyapatite-carbon

- nanotubes composite for 1-dopa detection in the presence of uric acid. *Journal of nanoscience and nanotechnology*, 16(6), pp.6185-6192.
- **79.** Omprakash, M., Arivanandhan, M., Sabarinathan, M., Koyama, T., Momose, Y., Ikeda, H., Tatsuoka, H., Aswal, D.K., Bhattacharya, S., Inatomi, Y. and Hayakawa, Y., 2016. Vertical gradient solution growth of N-type Si0. 73Ge0. 27 bulk crystals with homogeneous composition and its thermoelectric properties. *Journal of Crystal Growth*, 442, pp.102-109.
- **80.** Yu, J., Liu, Y., Pan, X., Zhao, H., Kumar, V.N., Arivanandhan, M., Momose, Y., Hayakawa, Y., Zhang, X., Luo, X. and Okano, Y., 2016. A review on InGaSb growth under microgravity and terrestrial conditions towards future crystal growth project using Chinese recovery satellite SJ-10. *Microgravity Science and Technology*, 28(2), pp.143-154.
- **81.** Gandhi, T.I., Babu, R.R., Ramamurthi, K. and Arivanandhan, M., 2016. Electrical and optical properties of Co 2+: SnO 2 thin films deposited by spray pyrolysis technique. *Journal of Materials Science: Materials in Electronics*, 27(2), pp.1662-1669.
- **82.** Prakash, N., Thangaraju, D., Karthikeyan, R., Arivanandhan, M., Shimura, Y. and Hayakawa, Y., 2016. UV-visible and near-infrared active NaGdF 4: Yb: Er/Ag/TiO 2 nanocomposite for enhanced photocatalytic applications. *RSC advances*, 6(84), pp.80655-80665.
- **83.** Gandhi, T.I., Babu, R.R., Ramamurthi, K. and Arivanandhan, M., 2016. Effect of Mn doping on the electrical and optical properties of SnO2 thin films deposited by chemical spray pyrolysis technique. *Thin Solid Films*, 598, pp.195-203.
- **84.** Prakash, N., Karthikeyan, R., Thangaraju, D., Navaneethan, M., Arivanandhan, M., Koyama, T. and Hayakawa, Y., 2015. Effect of erbium on the photocatalytic activity of TiO2/Ag nanocomposites under visible light irradiation. *ChemPhysChem*, *16*(14), pp.3084-3092.
- **85.** Usha, N., Sivakumar, R., Sanjeeviraja, C. and Arivanandhan, M., 2015. Niobium pentoxide (Nb2O5) thin films: rf Power and substrate temperature induced changes in physical properties. *Optik-International Journal for Light and Electron Optics*, *126*(19), pp.1945-1950.
- **86.** Inatomi, Y., Sakata, K., Arivanandhan, M., Rajesh, G., Kumar, V.N., Koyama, T., Momose, Y., Ozawa, T., Okano, Y. and Hayakawa, Y., 2015. Growth of In x Ga 1– x

- Sb alloy semiconductor at the International Space Station (ISS) and comparison with terrestrial experiments. *npj Microgravity*, *1*(1), pp.1-6.
- **87.** Arivanandhan, M., Gotoh, R., Fujiwara, K., Uda, S. and Hayakawa, Y., 2015. Segregation of Ge in B and Ge codoped Czochralski-Si crystal growth. *Journal of Alloys and Compounds*, 639, pp.588-592.
- **88.** Natarajan, V., Usharani, S., Arivanandhan, M., Anandan, P. and Hayakawa, Y., 2015. Effect of solvents on the bulk growth of 4-aminobenzophenone single crystals: A potential material for blue and green lasers. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, *145*, pp.329-332.
- **89.** Salleh, F., Oda, T., Suzuki, Y., Kamakura, Y. and Ikeda, H., 2015. Seebeck coefficient of SOI layer induced by phonon transport. *Makara Journal of Technology*, *19*(1), pp.1-4.
- **90.** Manimuthu, V., Yoshida, S., Suzuki, Y., Salleh, F., Arivanandhan, M., Kamakura, Y., Hayakawa, Y. and Ikeda, H., 2015. Phonon-drag contribution to Seebeck coefficient of Ge-on-insulator substrate fabricated by wafer bonding process. *Makara Journal of Technology*, 19(1), pp.21-24.
- **91.** Omprakash, M., Arivanandhan, M., Koyama, T., Momose, Y., Ikeda, H., Tatsuoka, H., Aswal, D.K., Bhattacharya, S., Okano, Y., Ozawa, T. and Inatomi, Y., 2015. High power factor of Ga-doped compositionally homogeneous Si0. 68Ge0. 32 bulk crystal grown by the vertical temperature gradient freezing method. *Crystal Growth & Design*, 15(3), pp.1380-1388.
- **92.** Senthilkumar, R., Ravi, G., Sekar, C., Arivanandhan, M., Navaneethan, M. and Hayakawa, Y., 2015. Determination of gas sensing properties of thermally evaporated WO 3 nanostructures. *Journal of Materials Science: Materials in Electronics*, 26(3), pp.1389-1394.
- **93.** Venkatesan, K., Babu, D.R., Bai, M.P.K., Supriya, R., Vidya, R., Madeswaran, S., Anandan, P., Arivanandhan, M. and Hayakawa, Y., 2015. Structural and magnetic properties of cobalt-doped iron oxide nanoparticles prepared by solution combustion method for biomedical applications. *International Journal of Nanomedicine*, *10*(Suppl 1), p.189.
- **94.** Manimuthu, V., Yoshida, S., Suzuki, Y., Salleh, F., Arivanandhan, M., Kamakura, Y., Hayakawa, Y. and Ikeda, H., 2015. Seebeck Coefficient of Ge-on-Insulator Layers Fabricated by Direct Wafer Bonding Process. In *Advanced Materials Research* (Vol. 1117, pp. 94-97). Trans Tech Publications Ltd.

- **95.** Saravanan, T., Shanmugam, M., Anandan, P., Azhagurajan, M., Pazhanivel, K., Arivanandhan, M., Hayakawa, Y. and Jayavel, R., 2015. Facile synthesis of graphene-CeO 2 nanocomposites with enhanced electrochemical properties for supercapacitors. *Dalton Transactions*, *44*(21), pp.9901-9908.
- **96.** Vadivel, M., Babu, R.R., Arivanandhan, M., Ramamurthi, K. and Hayakawa, Y., 2015. Role of SDS surfactant concentrations on the structural, morphological, dielectric and magnetic properties of CoFe 2 O 4 nanoparticles. *RSC Advances*, *5*(34), pp.27060-27068.