

Research Publications

List of Chapters Published in International Book

1. Moorthi Kanagaraj, **Sonachalam Arumugam** and Andrei Mourachkine, *Pressure Effect on Novel Iron Based Superconductors*, Horizons in World Physics. Volume 282, ISBN: Nova Science Publishers, USA. 978-1-63321-301-2 (2014).
2. **Arumugam Sonachalam**, Proceedings of 29th Annual General Meeting of Materials Research Society of India and National Symposium on Advances in Functional and Exotic Materials, **eInk Solutions**, ISBN 978-93-87526-16-7 (2018).
3. S. Esakki Muthu, **S. Arumugam**, Exchange Bias Effect in Ni-Mn Heusler Alloys, Intech Open publications, DOI: <http://dx.doi.org/10.5772/intechopen.91473> (2019)

List of Publications in the International Journals

1. Govindaraj Lingannan, Bobby Joseph, Chia Nung Kuo, Chin Shan Lue, Ponniah Vajeeston and Arumugam Sonachalam “*Differing pressure response of lattice structure in LaTMSb₂ (TM = Au or Ag) ternary antimonides*” **Bull. Mater. Sci.** **45:189 (2022)**
2. A Sivakumar, S Sahaya Jude Dhas, P Sivaprakash, A Dhayal Raj, Raju Suresh Kumar, S Arumugam, S Prabhu, R Ramesh, Shubhadip Chakraborty, SA Martin Britto Dhas “*Shock Wave Recovery Experiments on α -V₂O₅ Nano-Crystalline Materials: A Potential Material for Energy Storage Applications*” **Journal of Alloys and Compounds (2022 September)**
3. A. Sivakumar, S. Sahaya Jude Dhas; J. Thirupathy; P. Sivaprakash; S. Prabhu; K. Moovendran; A. Murugeswari; S. Arumugam; Martin Britto Dhas S.A “*Shock wave induced conformational phase transition of L-leucine*” **Journal of Molecular Structure (2022 September)**
4. R.Thiyagarajan, C.Saravanan, B.Ravikumar, **S.Arumugam**, “*Baroentropy change estimation using modified Maxwell equation through magnetization and resistivity measurements under pressure: An indirect method of barocaloric effect*” **Journal of Alloys and Compounds**, 912, 165146, (2022).
5. Divya S, P. Sivaprakash, S. Raja, S. Esakki Muthu, Ikhyun Kim, N. Renuka g, **S. Arumugam** Tae Hwan Oh, “*Impact of Zn doping on the dielectric and magnetic properties of CoFe₂O₄ nanoparticles*”, **Ceramics International**, (Published August 2022)
6. L. Govindaraj, **S. Arumugam**, R. Thiyagarajan, Dinesh Kumar, M. Kannan, Dhruba Das, T.S. Suraj, V. Sankaranarayanan, Kanikrishnan Sethupathi, G. Baskaran, Raman Sankar, M.S.Ramachandra Rao, “*Wohllleben Effect and Emergent π junctions in*

superconducting Boron doped Diamond thin films” **Physica C: Superconductivity and its applications** 598, 1354065, (2022).

7. Lalitha P, Arumugam S, Pandurangan A, Sivaprakash P, Surya S, Sinthiya A, “*Temperature effect on potassium nitrate-tricine nanoparticles synthesis to enhance third order optical nonlinearity*” **Topics in Catalysis** (Published: 10 June 2022)
8. Craig A. Ekstrum, Ragavendran Venkatesan, Chito Kendrick, Moshe Einav, Paramasivam Sivaprakash, Jeyanthinath Mayandi, Sonachalam Arumugam, and Joshua M. Pearce, “*The Effects of Substrate Temperature on the Growth, Microstructural and Magnetic Properties of Gadolinium-Containing Films on Aluminum Nitride*” **Surfaces** 2022, 5(2), 321-333
9. Sathiskumar Mariappan, Manikandan Krishnan, Dilip Bhoi, Hanming Ma, Jun Gouchi, R.P.Singh, Kapil Motla, Ponnaiah Vajeeston, **Arumugam Sonachalam** and oshia Uwatoko, “*Superconducting and structural properties of non-centrosymmetric Re_6Hf superconductor under pressure*” **Physical Review B** 105, 224505 (2022).
10. Subhendu Jana, Gopabandhu Panigrahi; Bikash Tripathy, Sairam K. Malladi, Muthukumaran Sundaramoorthy, **Sonachalam Arumugam**, Manish K. Niranjana, Jai Prakash “*Synthesis, characterization, and electronic structure of $SrBi_2S_4$* ” **Journal of Solid State Chemistry** 312, 123250,(2022).
11. Sivakumar;S.Sahaya Jude Dhas;J. Thirupathy;P. Sivaprakash; K. Anitha;Raju Suresh Kumar; **S. Arumugam**; Martin Britto Dhas S.A, “*Investigation on Crystallinity and Optical Properties of L-Tartaric Acid Single Crystal at Dynamic Shocked Conditions*” **Journal of Materials Science: Materials in Electronics**, (2022).
12. Govindaraj Lingannan, Bobby Joseph, Muthukumaran Sundaramoorthy, CN Kuo, Chin Shan Lue and **S. Arumugam**, “*Pressure-enhanced superconductivity in cage-type quasiskutterudite $Sc_5Rh_6Sn_{18}$ single crystal*” **Journal of Physics:Condensed Matter**, 34 245601 (2022)
13. Aswathappa Sivakumar, Sathiyadhas Sahaya Jude Dhas, Kondaveeti Showrilu, Paramasiva Sivaprakash, Raju Suresh Kumar, Abdulrahman I Almansour, Shubhadip Chakraborty, **Sonachalam Arumugam**, Sathiyadhas Amalapushpam Martin Britto Dhas “*Switchable Phase Transition from Crystalline to Amorphous States of Cadmium Sulfate Octahydrate Single Crystals by Shock Waves*” *physica status solidi (b)* (2022)
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insulator transition in Ba₂Ge₂Te₅: synthesis, crystal structure, resistivity, thermal conductivity, and electronic structure” **Materials Research Bulletin**, 308, 122914 (2022)

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20. P Lalitha, **S Arumugam**, A Sinthiya, V Sugumari. *Application of NLO and Antibacterial Activity of Tricine Doped Potassium Metal Ion Crystal (2022)*
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