

## **Recent Publications (EEC/PHYSICS)**

- [1] Role of TiO<sub>2</sub> in modifying elastic moduli and enhancing *in vitro* bioactivity of fluorophosphate glasses, V.Dhivya, R.Dharshini, K.Sakthipandi, and **G.Rajkumar\***, *Journal of Non-Crystalline Solids* 608 (2023): 122250.  
DOI: 10.1016/j.jnoncrysol.2023.122250      SCI Impact factor: **4.458**.
- [2] Micro-Raman spectroscopy analysis of dentin remineralization using egg shell derived nano-hydroxyapatite combined with phytosphingosine, S.V.Aruna Rani, K.Rajkumar, B.Saravana Karthikeyan, S.Mahalaxmi, **G.Rajkumar** and V. Dhivya *Journal of the Mechanical Behavior of Biomedical Materials*, 141 (2023) 105748.  
DOI: 10.1016/j.jmbbm.2023.105748      SCI Impact factor: **4.527**.
- [3] Influence of strontium containing fluorophosphate glass on to structural and mechanical behavior of MTA network, Kuhu Lunawat, S.Kavitha, **G.Rajkumar**, V.Dhivya, N.RaviKumar and S.Mahalaxmi, *Journal of the Mechanical Behavior of Biomedical Materials*, 140, (2023) 105750.  
DOI: 10.1016/j.jmbbm.2023.105750      SCI Impact factor: **4.527**.
- [4] “Small Polaron Hopping to Efros–Shklovskii like Variable Range Hopping Transition in Graphene Wrapped V<sub>2</sub>O<sub>5</sub> Nanoparticles: Roleplay of Mott Gap” **D. Surya Bhaskaram** and G. Govindaraj, *Journal of physical chemistry C*, 2023, vol. 127, 1. 550–561 (SCI Impact Factor: **4.177**).
- [5] “Enhanced *in vitro* inhibition of MCF-7 and magnetic properties of cobalt incorporated calcium phosphate (HAp and β-TCP) nanoparticles” **Baskar Srinivasan**, K Elayaraja, E. A. K. Nivethaa, M. Senthil Pandian, P. Ramasamy, L. H. Catalani and S. Narayana Kalkura *Ceramics International* 2023, vol. 49. pp.855-861. (SCI Impact Factor: **5.532**).
- [6] Characterization of Nanohydroxyapatite Incorporated Carboxymethyl Chitosan Composite on Human Dental Pulp Stem Cells, G. Ishwarya, B. Saravana Karthikeyan, S. Mahalaxmi, B. Kaviya, G. Rajkumar, V. Dhivya, Anil Kishen, S. Sankaranarayanan, N. Gurucharan, *International Endodontic Journal*, 56 (2023) 486–501.  
DOI:10.1111/iej.13885      SCI Impact factor: **5.165**.
- [7] “Polymer modified magnetic-luminescent Mn<sub>x</sub>Fe<sub>3-x</sub>O<sub>4</sub>@(Y,D<sub>y</sub>/Eu)VO<sub>4</sub> nanocomposites with efficient heat generation for combined optical imaging and magnetic fluid hyperthermia in cancer therapy: Mn<sup>2+</sup> doping for enhanced heating effect”. Goutam Singh Ningombam, **Baskar Srinivasan**, H. C. Amrutha, S. Narayana Kalkura, Yogendra Sharma and N. Rajmuhon Singh *Dalton Transactions* 2022, vol. 51.pp.8510. (SCI Impact Factor: **4.569**).
- [8] “Analogous Particle Swarm Optimization for Choosing Optimal Selection of Virtual Machine in Cloud”, R. Prasanna Kumar; T Vignesh; Balaji Vijayan Venkateswarulu; **R. Sivakumar**, *IEEE Transaction*, 2022, DOI: 10.1109/ICCCI54379.2022.9741065
- [9] “Dual elliptical core-based photonic crystal sensor for detection of ultra-low-level bioethanol concentration”, P. Vijayakumari, • Ribu Mathew, • Dhinakaran Vijayalakshmi, **R.Sivakumar**; *Journal of Optics Springer*, 2022, DOI: 10.1007/s12596-022-00827-x

- [10] “Magnetism and Raman investigations of hydrothermally reduced graphene oxide incorporated  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanocomposites: The role of temperature-dependent charge transfer induced interfacial interactions”, Smhrutisikha Biswal, **D. Surya Bhaskaram**, G Govindaraj, *Journal of physical chemistry C*, **2022**, vol. 126, 48 pp. 20456–20469 (SCI Impact Factor: **4.177**).
- [11] “Quantum computational, spectroscopic, topological investigations and molecular docking studies on piperazine derivatives: A comparative study on Ethyl, Benzene and Furan sulfonyl Piperazine” M. Malar Wezhli, P. Balamurugan, **K. Raju**, S. Sevvanthi, Ahmad Irfan, Saleem Javed and S. Muthu *J. Molecular Structure* , **2022**, vol. 1274, 134324. DOI: 10.1016/j.molstruc.2022.134324 (Impact Factor: **3.841**)
- [12] “Computation and experimental results on spectroscopic and physicochemical properties of efficient piperidine driven passive optical limiting material” Prathebha K, **Raju K**, Tejaswi Ashok Hegde and Vinitha G., *Physica Scripta*, **2022** vol. 97, 035804. DOI: 10.1088/1402-4896/ac4d00 (Impact Factor: **3.081**)
- [13] Investigation of magnetic phase transitions in Ni<sub>0.5</sub>Cu<sub>0.25</sub>Zn<sub>0.25</sub>Fe<sub>2-x</sub>La<sub>x</sub>O<sub>4</sub> nanoferrites using magnetic and *in-situ* ultrasonic measurements, K.Sakthipandi, B.Ganesh Babu, **G.Rajkumar**, Aslam Hossian, M.Srinidhi Raghavan, and M.Rajesh Kumar, *Physica B: Condensed Matter* 645 (2022) 414280. DOI: 10.1016/j.physb.2022.414280 SCI Impact factor: **2.988**.
- [14] Impact of silver on fluorophosphate glasses to improve *in vitro* bioactivity and antibacterial efficacy, V.Dhivya, **G.Rajkumar\***, S.Mahalaxmi, K.Rajkumar, R.Karpagam, K.Sakthipandi, *Ceramic international* 48 (2022) 25346-25354. DOI: 10.1016/j.ceramint.2022.05.208 SCI Impact factor: **5.532**.
- [15] Eggshell derived nano-hydroxyapatite incorporated carboxymethyl chitosan scaffold for dentine regeneration: A laboratory investigation, B.Kaviya, B.Saravana Karthikeyan, G.Ishwarya, S.Mahalaxmi, **G.Rajkumar**, V.Dhivya, Anil Kishen, *International Endodontic Journal*, 55 (2022) 89–102. DOI: 10.1111/iej.13644 SCI Impact factor: **5.165**.
- [16] Experimental and finite element analysis of lignite fly ash on the mechanical properties of sisal-added polymer matrix composite, G.K.Sathishkumar, **G.Rajkumar**, R.Karpagam, *Journal of Natural Fibers* 19, (2022) 7008-7032. DOI: 10.1080/15440478.2021.1941487 SCI Impact factor: **3.507**.
- [17] Structural and mechanical properties of lignite fly ash and flax-added polypropylene polymer matrix composite, **G.Rajkumar**, G.K.Sathishkumar, R.Karpagam, V.Dhivya, *Journal of Natural Fibers*, 19 (2022) 6534-6552. DOI: 10.1080/15440478.2021.1927929 SCI Impact factor: **3.507**.
- [18] Influence of lignite fly ash on the structural and mechanical properties of banana fiber containing epoxy polymer matrix composite, G.K.Sathishkumar, G.Gautham, **G.Rajkumar**, R.Karpagam, V.Dhivya, *Polymer Bulletin*, 79 (2022) 285-306. DOI: 10.1007/s00289-020-03524-6 SCI Impact factor: **2.843**.

- [19] Synthesis and mechanical properties of natural fiber reinforced epoxy/polyester/polypropylene composites: A Review, G.K.Sathishkumar, Mohamed Ibrahim, **G.Rajkumar**, B.Gopinath, R.Karpagam, **Journal of Natural Fibers**, 19 (2022) 3718-3741.  
DOI: 10.1080/15440478.2020.1848723                      SCI Impact factor: **3.507**.
- [20] “Studies of synthesis, crystal structure and antidiabetic activity of quinolinium, 2-carboxylic 2-chloroacetic acid” R. Kavitha, **S. Nirmala**, V. Sampath, V. Shanmugavalli, B. Latha, **Journal of Molecular Structure** **2021** V1240, Article No.130572. (**Impact Factor: 3.841**)
- [21] Effects of strontium-containing fluorophosphate glasses for enhancing bioactivity and enamel remineralization, V.Dhivya, S.Mahalaxmi, K.Rajkumar, R.Karpagam, K.Sakthipandi, **G.Rajkumar\***; **Materials Characterization**, 181, (2021) 111496.  
DOI: 10.1016/j.matchar.2021.111496                      SCI Impact factor: **4.537**
- [22] “Structural and Mechanical Properties of Lignite Fly Ash and Flax-added Polypropylene Polymer Matrix Composite” Rajkumar G, Sathishkumar G K and **Sivakumar R**, **Journal of natural fibers**, Taylor & Francis, **2021** DOI: 10.1080/15440478.2021.1927929