Seminar of
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Mahatma Gandhi University (MGU), Kottayam-686 560, Kerala, India

20 décembre 2023 à 14h (20th of December 2023 at 2 pm)

Salle 3-A012, IJL, Campus Artem

"Novel Engineered Nanostructured Materials for Emerging Applications"

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Novel nanomaterials and their hybrids are the focus of present research arena towards tailored applications in fields of energy, water, food and health security. Various strategies could be designed for the development of such materials using different techniques. This talk will be mainly highlighting the works on Graphene hybrids, structures derived from biomass and transition metal dichalcogenide (TMDC) hybrids for energy, sensing and photocatalytic applications. The talk will also touch upon the recent computational works carried out for potential sensing applications [1-6].

Keywords: rGO, Graphene allotropes, Biomass, Metal nanostructures, Photocatalysis, Sensors, SERS

References:

1. Enhanced Nitrobenzene Sensing in Metal anchored Gamma-Graphyne: Predictions from Density Functional Theory,S Lakshmy, N Kalarikkal, B Chakraborty,Journal of Physics D: Applied Physics(2023)
2. Silver nanowire decorated template-free grown Co_3O_4 nanocones: a 3D SERS substrate for H_2O_2 sensing,BC Bhadrapriya, A Akshaya, MT Rahul, A Saha, S Thomas,N Kalarikkal,Journal of Nanoparticle Research 25 (3), 47(2023)
3. Ag3PO4-coconut shell derived carbon composite for visible light driven photocatalysis,BA Bose, A Saha, N Kalarikkal,Journal of Physics and Chemistry of Solids 173, 111102 (2023)
4. Fluorescence and Nonlinear Optical Response of Graphene Quantum Dots Produced by Pulsed Laser Irradiation in Toluene, Nancy, P., Joy, N., Valluvadasan, S., Philip, R., Thomas, S., Antoine, R., &Kalarikkal, N., *Molecules*, *27*(22), 7988, 2022.
5. In Situ Decoration of Gold Nanoparticles on Graphene Oxide via Nanosecond Laser Ablation for Remarkable Chemical Sensing and Catalysis, P Nancy, A K Nair, R Antoine, S Thomas, N Kalarikkal, *Nanomaterials 9 (9), 1201, 2019*
6. Multifunctional nitrogen sulfur co-doped reduced graphene oxide–Ag nano hybrids (sphere, cube and wire) for nonlinear optical and SERSapplications. Anju K Nair, K B Bhavitha, Sreekanth Perumbilavil, Pranitha Sankar, Didier Rouxel, M S Kala, Sabu Thomas, N Kalarikkal, *Carbon* 132, 380-393, 2018

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