

Shivani Shisodia

- Ph.D. candidate
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• **PROFILE:**

- Highly self-motivated Ph.D. candidate with demonstrated research expertise in synthesis of inorganic semiconductor nanostructures and polymer nanocomposites, Strong interpersonal skills.
- Experimental techniques: X-ray Diffraction spectroscopy, Fourier-transform infrared spectroscopy, Raman spectroscopy, Nuclear magnetic resonance Spectroscopy, X-ray photoelectron spectroscopy, Electron microscopy, UV-Visible spectroscopy, Differential scanning calorimetry, Thermogravimetric analysis, Mass spectroscopy, Impedance spectroscopy, Four-point method, Seebeck coefficient by two probe method, Thermal conductivity by Photothermal radiometry technique.
- Computer skills: Windows, LaTeX, Origin, X'pert high score, Digital micrograph, ImageJ, XPSPEAK, CASA XPS, LabSpec, Zotero, LabRAM etc.

• **EDUCATION:**

Université du Littoral Côte d'Opale, Dunkerque, France (November 2018-Till now)

Institut d'électronique de microélectronique et de nanotechnologie(I.E.M.N.) Lille, France (November 2018-January 2020)

Ph.D. Physics, July 2022 (Expected)

Chaudhary Charan Singh University, Meerut, India

M.Sc. Physics, July 2014 (74.95%)

B.Sc. Physics, Chemistry, Mathematics, July 2012 (72.6%)

• **RESEARCH INTEREST:**

Organic-inorganic nano material synthesis and characterization, Thermoelectric properties, waste heat management, Li-ion battery

• **RESEARCH EXPERIENCE:**

- Currently working on the project entitled "Development of new polymer thermoelectric nanocomposites doped with nanoparticles" (November 2018-till now), at Université de Littoral Côte d'Opale, Dunkerque and Institut d'électronique de microélectronique et de nanotechnologie (I.E.M.N.) Lille, France
- Previously working on the project entitled "Functionalized polymeric membranes for effective hydrogen separation" (July 2016-August 2018) at Malaviya National Institute of Technology Jaipur, India

• **TEACHING EXPERIENCE:**

- Worked as a Teaching assistant in Mangalayatan University (September 2014 – June 2016)

• **AWARDS/MEMBERSHIP:**

- Best oral presentation award in "Sixth International Symposium on Dielectric Materials and Applications 2021" at Calais, France.
- Best oral presentation award in "The 5th International Conference on Materials Sciences and Nanomaterials (ICMSN 2021) London" online.
- Graduate Aptitude Test in Engineering (GATE) in Physics awarded by Indian Institute of Science, Bangalore (2016) with Gate score 352. GATE is countrywide eligibility test.
- Student (s010) member of Material Research Society.

• **CONFERENCES AND PUBLICATIONS:**

- Titanium dioxide quantum dot decorated graphene oxide/PEDOT: PSS nanocomposite for Thermoelectric applications, Sustainable Energy & Fuels-RSC, *Under Review*, **Shivani**

Shisodia, Benoit Duponchel, Gérard Leroy, Abdelhak Hadj Sahraoui, Dharmendra Pratap Singh, Christophe Poupin, Lucette Tidahy, Renaud Cousin, Patrick Ropa, Michael Depriester.

- Effect of UV irradiation and PVP for Pd nanoparticles binding in Polycarbonate membranes for improving hydrogen selectivity, International Journal of Hydrogen Energy vol 43, issue 47, (2018) 21690-21698, Rajesh Kumar, Kamakshi Kamakshi, **Shivani Shisodia**, Manoj Kumar, Kamlendra Awasthi, [10.1016/j.ijhydene.2018.06.09](https://doi.org/10.1016/j.ijhydene.2018.06.09)
 - Silicon carbide semiconductors derived from agro-waste for upcoming technologies operating in harsh atmosphere and at high temperatures, Srisaran Venkatachalam, **Shivani Shisodia**, Stéphan Lenfant, Djamilia Hourlier, International Conference on Frontiers at the Chemistry- Allied Sciences Interfaces 2019 Arras, France
 - Effect of Nanostructuring on Thermoelectric Properties of Polymer Nanocomposites, **Shivani Shisodia**, A Hadj Sahraoui, D P Singh, M Depriester, Sixth International Symposium on Dielectric Materials and Applications 2021, at Calais, France.
 - Study of Thermoelectric Performance of the polymer nanocomposites by applying Generalized effective medium theory, **Shivani Shisodia**, A Hadj Sahraoui, D P Singh, B Escorne, M Depriester, Materials research society fall meeting 2021, online.
 - Room temperature thermoelectric behavior of GO-TiO₂@ PEDOT: PSS hybrid composites, **Shivani Shisodia**, Djamilia Hourlier, Dharmendra P. Singh, Benoit Escorne, Abdelhak H. Sahraoui, Michael Depriester, Materials Research Society 2021 virtual spring meeting and exhibit- online.
 - Thermal properties of GO-TiO₂ @PEDOT: PSS polymer nanocomposites, **Shivani Shisodia**, Dharmendra Pratap Singh, Abdelhak Hadj Sahraoui, Michael Depriester, The 5th International Conference on Materials Sciences and Nanomaterials (ICMSN 2021) London-online.
 - Propriétés thermoélectriques de composites PEDOT/PSS avec inclusion de nanostructures floriformes GO-TiO₂, **Shivani Shisodia**, **My thesis in 180 seconds Challenge** inter-doctorants des Rev3 Energy Days December, 2020.
 - Development of new polymer nanocomposite for thermoelectric applications, **Shivani Shisodia**, **Ma thèse en 180 secondes**, Journée des doctorants du Pôle MTE, July 2021.
 - Synthesis, characterization and antibacterial activity of Europium doped ZnO nanoparticles, **Shivani Shisodia**, Lokesh Kumar Jangir, Anjali Awasthi, Manoj Kumar, Kamlendra Awasthi International Symposium on Eco-materials Processing and Design 2018, Jaipur, India
 - Effect of cation size on potential driven transport properties of PET membrane, **Shivani Shisodia**, Anjali Awasthi, Manoj Kumar, Kamlendra Awasthi, Recent Trends on Membranes and Separation Technology 2017, Bhavnagar, India.
 - Preparation, Characterization and Antimicrobial properties of Terbium doped ZnO nanoparticles, **Shivani Shisodia**, Lokesh Kumar, Anjali Awasthi, Manoj Kumar, Kamlendra Awasthi International Conference on Frontiers at the Chemistry-Allied Sciences Interfaces 2017, Jaipur, India
- **WORK STYLE :**
 - Willing to perform basic tasks and solve research problems.
 - Curious to learn new things and adapt to the new environments quickly.
 - Strong independent work style and excellent teamwork skills.
 - Well-organized and passionate.
 - **LANGUAGES:**
 - **Hindi**- Native.
 - **English**- Good in reading, writing and speaking.
 - **French** – A2 Level in reading, writing, speaking.
 - **REFREE DETAILS :**
 - **Michael Depriester**, Maître de conférences :MCF HDR, Université de Littoral côte d'opale, Dunkerque,France
Email : michael.depriester@univ-littoral.fr
 - **Abdelhak Hadj Sahraoui**, Professor, Ex-Director of UDSMM laboratory, Université de Littoral côte d'opale, Dunkerque, France
Email : hadj@univ-littoral.fr