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List of Publications

Publications Relevant to the Thesis

1. **Raj Kumar**, Bipin K. Singh, Rajesh K. Tiwari, Praveen C. Pandey, Perfect selective metamaterial absorber with thin-film of GaAs layer in the visible region for solar cell applications, *Optical and Quantum Electronics* **54**, 416 (2022).

2. **Raj Kumar**, Bipin K. Singh, Praveen C. Pandey, Tungsten-based broadband perfect metamaterial absorber in visible to near-infrared region for solar cell applications, *Journal of International Academy of Physical Sciences* **25**, 427-446 (2021).

3. **Raj Kumar**, Bipin K. Singh, Praveen C. Pandey, Broadband metamaterial absorber in the visible region using a petal-shaped resonator for solar cell applications, *Physica E: Low-dimensional Systems and Nanostructures* **142**, 115327(2022).

4. **Raj Kumar**, Bipin K. Singh, Praveen C. Pandey, Highly effective gallium arsenide split-disk resonator-based ultrathin metamaterial absorber. (*Accepted in Bulletin of Materials Science 2023*).

Other Publications

1. **Raj Kumar**, Bipin K. Singh, Praveen C. Pandey, Cone-shaped resonator-based highly efficient broadband metamaterial absorber, (*Accepted in Optical and Quantum Electronics 2023*)

2. **Raj Kumar**, Bipin K. Singh, Praveen C. Pandey, Study of gallium arsenide based perfect metamaterial absorber in the broadband region, *2020 IEEE 17th India Council International Conference (INDICON)* 1-4 (2020).

3. **Raj Kumar**, Bipin K. Singh, Praveen C. Pandey, Polarization-insensitive broadband perfect metamaterial absorber in the optical region, *IOP Conference Series: Materials Science and Engineering* **1263**, 012016 (2022).

4. Umang Ramani, Hemant Kumar, **Raj Kumar**, Bipin K. Singh, Praveen C. Pandey, Rectangular-Shape Cladding-Based Photonic Crystal Fiber Surface Plasmon Resonance-Based Refractive Index Sensor. *Plasmonics* 1-9 (2023).

5. Hemant Kumar, **Raj Kumar**, Umang Ramani, Bipin K. Singh, Praveen C. Pandey, Al-doped ZnO based long range optical fiber sensor for efficient low refractive index detection. (*Accepted in Optical and Quantum Electronics 2023*).

Conferences/ Workshop/ Symposium

1. **Raj Kumar,** Bipin K. Singh, Praveen C. Pandey, **2020 IEEE 17th India Council International Conference (INDICON)**, 11th-13th Dec 2020, New Delhi, India.

2. **Raj Kumar,** Praveen C. Pandey, **27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on "Frontiers in Physics"**, 26-28 Oct 2021, Department of Physics, Islamic University of Science and Technology (IUST), Awantipora-India, Department of Physics, University of Kashmir (UOK), Srinagar, India.

3. **Raj Kumar,** Praveen C. Pandey, **International Conference on Advanced Materials for Better Tomorrow**, 13-17 July 2021, IIT (BHU), Varanasi.

4. **Raj Kumar,** Bipin K. Singh, Praveen C. Pandey, **4th International Conference on Science and Engineering of Materials (ICSEM-2021)**, 19-22 July 2021, Sharda University, Greater Noida.

5. **Raj Kumar,** Praveen C. Pandey, **International Conference on Materials-Properties, Measurement, and Applications,** 9-13 May 2022, Research & Postgraduate Department of Physics, Fatima Mata National College (Autonomous), Kerala, India