Curriculum Vitae

I. PROFESSIONAL EXPERIENCE

Since 2021 ***Marie Curie Fellow:*** Institute of Physics, Prague, Czech Republic

- Terahertz Spectroscopy of 2D materials

2020-2021 ***Scientist:*** M-slov Pvt. Lt., Oxford, UK

2018-2020 ***Post-doctoral research fellow:*** Department of Chemical Sciences, *Argonne National Lab and UIC, Illinois, USA*

- Desisigning pump-probe experiments, the study of the photophysics of 2D materials

2017-2018 ***Asst. prof. (on contract)*** School of Physics, Central University of Rajasthan, India, 2012-2013 and 2017-2018

- Teaching Master students ander graduates, designing experiments for Master and Research scholar

2014-2017 ***Postdoctoral research fellow:*** King Abdullah University of Science and Technology (KAUST)

- Spectroscopy study and device fabrication using perovskites in both film and solution phases.
- Material characterization using microscopy, Raman, FTIR, TGA, XRD, etc.

II. EDUCATION

07/2012 ***Doctor of Philosophy (Physics):*** Department of Physics, Indian Institute of Technology Madras (IITM), Chennai, India. Thesis title: *Nonlinear Optical properties of a few low- dimensional systems of varying size, shape, and composition*

07/2006 ***Master of Science (Physics):*** School of Physics, Sambalpur University, Odisha, India **(1st class)**

07/2004 **Bachelor of Science:** Utkal University, Odisha, India (*Physics (major), Chemistry and Mathematics* **(1st class honors and Distinction)**

III. RESEARCH EXPERIENCE

- ❖ Extensive experience in synthesis and characterization techniques for various nanomaterials including MXene, perovskite, graphene, nanoclusters by chemical routes, CVD, and Pulsed Laser deposition.

- ❖ Wide-ranging experience working with various laser systems including femtosecond oscillators and regenerative amplifiers, parametric oscillators and amplifiers, fiber lasers, solid-state pico-, and nanosecond lasers, and supercontinuum sources. These are used in various laser-matter interaction experiments including terahertz (THz) time-domain spectroscopy, Time-resolved spectroscopic techniques, and nonlinear spectroscopy (Z-scan and multi-photon spectroscopy)

- ❖ Extensive knowledge and operation of spectroscopy (Raman, FTIR), microscopy, imaging, laser material processing, etc. in industry and academic research (Solar cell, visible light communication, Photo-detector)

- ❖ Excellent management skills, technical support skills, and service in research laboratories.

IV. ACADEMIC HONORS and RECOGNITIONS

03/2021 *"***Marie curie research fellowship"** by the European Commission

07/2011 ***"SPIE travel grant"*** for attending an international conference in San Diego, USA, awarded by SPIE, USA

04/2010 ***"Institute travel award"*** for attending international conference awarded by Dean academic research, IIT Madras

10/2006 ***Awarded JEST 2006 in Physics-*** a national level examination by Department of Atomic Energy (DAE), Govt. of India

02/2006 ***Awarded GATE 2006 in Physics-*** a national level examination for pursuing Ph.D by Ministry of Human Resources and Development (MHRD), Govt. of India

V. SELECTED JOURNAL PUBLICATIONS

1. *Manas R. Parida*, Raihana Begum, Ahmed L. Abdelhady, Banavoth Murali, Noktan Alyami, Ghada H. Ahmed, Mohamed Nejib Hedhili, Osman M. Bakr and Omar F. Mohammed Tunable-Interfacial Charge Transfer in Heterovalent doped $CsPbBr_3$ Perovskite Nanocrystals, **Journal of the American Chemical Society**, 139, 731-737 (2018).

2. G Meizyte, R Bose, A Adhikari, J Yin, MA Haque, **Manas R Parida**, MN Hedhil Imaging the Reduction of Electron Trap States in Shelled Copper Indium Gallium Selenide Nanocrystals Using Ultrafast Electron Microscopy The Journal of Physical Chemistry C 122 (26), 15010-15016 (2018)

3. AA Almansaf, ***Manas R Parida***, TMD Besong, P Maity, MS Bootharaju, OM Bakr The impact of Au doping on the charge carrier dynamics at the interfaces between cationic porphyrin and silver nanoclusters, **Chemical Physics Letters** (2017)

4. GH Ahmed, ***Manas R. Parida***, A Tosato, LG AbdulHalim, A Usman, The impact of electrostatic interactions on ultrafast charge transfer at Ag 29 nanoclusters–fullerene and CdTe quantum dots–fullerene interfaces, **Journal of Materials Chemistry C**, 4 (14), 2894-2900 (2017)

5. ***Manas R. Parida***, Shawkat M. Aly, Erkki Alarousu, Omar F. Mohammed, Tunable-Photophysical Processes of Porphyrin Macrocycles on the Surface of ZnO Nanoparticles, **J. Phys. Chem. C,** 119, 2614–2621 (2016)

6. ***Manas R. Parida***, Shawkat M. Aly, Erkki Alarousu, A. Sridharan, D.H. Nagaraju, Husam N. Alshareef, and Omar F. Mohammed, To what extent can charge localization influence electron injection efficiency at graphene-porphyrin interfaces? **Phys. Chem. Chem. Phys**, 1**7**, 14513-14517 (2016)

7. Namchul Cho, Feng Li, Bekir Turedi, Lutfan Sinatra, Smritakshi P. Sarmah, **Manas R. Parida**, Makhsud I. Saidaminov, Banavoth Murali, Victor M. Burlakov, Alain Goriely, Omar F. Mohammed, Tom Wu, and Osman M. Bakr, Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films, **Nature communication**, **7**, 13407 (2016)

8. TT Isimjan, P Maity, J Llorca, T Ahmed, ***Manas R Parida***, OF Mohammed, Comprehensive Study of All-Solid-State Z-Scheme Photocatalytic Systems of ZnO/Pt/CdZnS, **ACS Omega** 2 (8), 4828-4837 (2018)

9. Y Zhang, J Yin, ***Manas R Parida***, GH Ahmed, J Pan, OM Bakr, JL Brédas,Direct-Indirect Nature of the Bandgap in Lead-Free Perovskite Nanocrystals, **Journal of Physical**

Chemistry Letters 8 (14), 3173-3177 (2017)

10. Amani A. Alsam, Aniruddha Adhikari, ***Manas R Parida***, Shawkat M. Aly, Osman M. Bakr, and Omar F. Mohammed, Bane of Hydrogen Bond Formation on the Photoinduced Charge-Transfer Process in Donor-Acceptor Systems, **J. Phys. Chem. C,** 121 (14), 7837-7843 (2017)

11. M Bootharaju, S Kozlov, Z Cao, M Harb, ***Manas R Parida***, MN Hedhili,Direct versus Ligand-Exchange Synthesis of [PtAg28 (BDT) 12 (TPP) 4] 4- Nanoclusters: Effect of Single-Atom Dopant on the Optoelectronic and Chemical Properties, **Nanoscale** (2017)

12. Dhinesh Babu Velusamy, Md. Azimul Haque, ***Manas R. Parida***, Fan Zhang, Tom Wu, Omar F. Mohammed, Husam N. Alshareef, 2D Organic - Inorganic Hybrid Thin Films for Flexible UV-Visible Photodetectors, **Advanced Functional Materials,** 27 (15), 1605554 (2017)

13. AA Alsam, SM Aly, ***Manas R Parida***, E Alarousu, Z Cao, L Cavallo,Real-time observation of intersystem crossing induced by charge recombination during bimolecular electron transfer reactions, **Dyes and Pigments** 136, 881-886 (2017)

14. MS Bootharaju, SM Kozlov, Z Cao, ***Manas R Parida***, M Harb, N Maity, A Shkurenko, Doping-Induced Anisotropic Self-Assembly of Silver Icosahedra in [Pt2Ag23Cl7 (PPh3) 10] Nanoclusters, **Journal of the American Chemical Society** 139 (3), 1053-1056 (2017)

15. I Dursun, C Shen, ***Manas R Parida***, Omar F. Mohammed, Boon S. Ooi, and Osman M. Bakr, Perovskite Nanocrystals as a Color Converter for Visible Light Communication, **ACS Photonics**, 3 (7), 1150–1156 (2016)

16. GH Ahmed, J Liu, ***Manas R Parida***, B Murali, R Bose, NM AlYami, MN Hedhili, Osman M. Bakr and Omar F. Mohammed, Shape-Tunable Charge Carrier Dynamics at the Interfaces between Perovskite Nanocrystals and Molecular Acceptors, **J. Phys. Chem. Lett** 7, 3913-3919 (2016)

17. RR Haikal, X Wang, YS Hassan, ***Manas R Parida***, B Murali, OF Mohammed Porous–Hybrid Polymers as Platforms for Heterogeneous Photochemical Catalysis, **ACS Applied Materials & Interfaces** 8 (31), 19994-20002 (2016)

18. Riya Bose, Ashok Bera, ***Manas R. Parida***, Anirudhha Adhikari,Basamat S. Shaheen, Erkki Alarousu, Jingaya Sun,Tao Wu, Osman M. Bakr, Omar F. Mohammed, Real-Space Mapping of Surface Trap States in CIGSe Nanocrystals Using 4D Electron Microscopy, **Nano letters**, 16 (7), 4417–4423 (2016)

19. Qana Alsulami, Banavoth Murali, Yara Alsinan, ***Manas R. Parida***, Shawkat M. Aly, Omar F. Mohammed, Remarkably high conversion efficiency of inverted bulk heterojunction solar cells: from ultrafast laser spectroscopy and electron microscopy to device fabrication and optimization, **Advanced Energy Materials**, 6, 1502356 (2016)

20. Riya Bose, Jingya Sun, Jafar I. Khan, Basamat S. Shaheen, Aniruddha Adhikari, Tien Khee Ng, Victor M. Burlakov, **Manas R. Parida**, Davide Priant, Alain Goriely, Boon S. Ooi, Osman M. Bakr, Omar F. Mohammed. Spatial and Temporal Imaging of Energy Loss and Carrier Diffusion in InGaN Nanowires using Scanning Ultrafast Electron Microscopy, **Advanced Materials**, 28, 5106–5111 (2016)

21. Giada Soldan, Maha A. Aljuhani, Megalamane S. Bootharaju, Lina G. Abdul Halim, ***Manas R. Parida***, Omar F. Mohammed, and Osman M. Bakr, Gold Doping of Silver Nanoclusters Leads to a 26-fold Enhancement in the Luminescence Quantum Yield, **Angewandte Chemie**, 128 (19), 5843-5847 (2016)

22. M. S. Bootharaju, C. P. Joshi, ***Manas R. Parida***, O. F. Mohammed, O. M. Bakr, Templated Atom-Precise Galvanic Synthesis and Structure Elucidation of a [Ag24Au (SR) 18]- Nanocluster, ***Angew. Chem. Int. Ed***., 55, 922 (2016)

23. Shawkat Aly, ***Manas R. Parida***, Erkki Alarousu and Omar Abdelsaboor, Ultrafast Electron Injection at the Cationic Porphyrin- Graphene Interface Assisted by Molecular Flattening, ***Chem. Commun***., 50, 10452-10455 (2014)

24. J Pan, SP Sarmah, B Murali, I Dursun, W Peng, ***Manas R. Parida***, J Liu, Air-Stable Surface-Passivated Perovskite Quantum Dots for Ultra-Robust, Single-and Two-Photon-Induced Amplified Spontaneous Emission. **J. Phys. Chem. Lett.**, 6, 24, 5027–5033 (2015)

25. AA Alsam, SM Aly, A Usman, ***Manas R. Parida***, S Del Gobbo, E Alarousu, Bimolecular Excited-State Electron Transfer with Surprisingly Long-Lived Radical Ions, **The Journal of Physical Chemistry C** 119, 38, 21896-21903 (2015)

26. Manas K Bhunia, S Melissen, ***Manas R. Parida***, P Sarawade, JM Basset, DH Anju, Dendritic Tip-on Polytriazine-Based Carbon Nitride Photocatalyst with High Hydrogen Evolution Activity, **Chemistry of Materials**, 27, 24, 8237–8247 (2015)

27. Riya Bose, Ghada A. Hamdi, Erkki Alarousu, ***Manas R. Parida***, Ahmed L. Abdelhady, Osman M. Bakr and Omar F. Mohammed, Direct Femtosecond Observation of Charge Carrier Recombination in Ternary Semiconductor Nanocrystals: The Effect of Composition and Shelling, **J. Phys. Chem. C*,*** 119, 3439-3446 (2015)

28. ***Manas R. Parida***, C.Vijayan, Enhancement of nonlinear optical absorption in Copper decorated Fe_2O_3 nanoparticles, **AIP Conf. Proc.**, 1512, 416 (2013)

29. ***Manas R. Parida***, C. Vijayan, C.S. Rout, C. S. Suchand Sandeep, Reji Philip, Enhanced nonlinear absorption in β-$AgVO_3$ nanobelts on decoration with Ag nanoparticles, **Applied Physics Letters**, 100**,** 121119 (2012)

30. ***Manas R. Parida***, C. Vijayan, C.S. Rout, P.C.Deshmukh, C. S. S. Sandeep, R Philip, Room-temperature ferromagnetism and optical limiting in V_2O_5 nanoflowers synthesized by a novel method, **J. Phys. Chem. C,** 115**,** 1**,** 112 (2011)
