: FACULTY DETAILED RESEARCH DATA:

Name of the Faculty: Dr. Arpita Sarkar

Designation: Associate Professor

Department: Chemistry

School: School of Basic Sciences

Research Area: Functional Mesoporous Materials, Nanomaterials Synthesis and their Applications.

Details of research portfolio of faculty:

A. Researcher's ID details:

Google Scholar ID: IHdYLqsAAAAJ Orchid ID: 0000-0002-7881-2696

Scopus ID: 57196719869 Vidwan ID: 525692

B. Publication details:

1. Conference proceedings/ Conference paper:

Sl. No.	Name of the Conference	Title of the paper	Month & Year of Publication	Author(s) Name	National/ International	doi number (if any)	ISSN/ISBN no.
1.	2nd International Conference on Mechanical Materials and Renewable Energy (ICMMRE 2019)	Facile Synthesis of Ti-W-O Mixed Oxide Photoanode for Photoelectrochemical Solar Water Oxidation	November 2020	**Soumya Kanti Biswas,** Arpita Sarkar	International	https://doi.org/10.1063/5.0024758	Online ISSN 1551-7616 Print ISSN 0094-243X

2. Publications in SCI/Scopus indexed Journals:

Sl. No	Name of the Journal (mention SCI/scopus)	Title of the paper	Month & Year of Publication	Author(s) Name (Highlight the corresponding and 1st author in every article)	doi number	Issue No. &Volume No.	Page no.	ISSN of the journal
1.	Journal of Environmental Chemical Engineering	In situ NADH regeneration coupled to enzymatic CO_2 reduction: from fundamental concepts to recent advances	April, 2025	**Neha Gupta**, Arpita Sarkar, **Soumya Kanti Biswas**	https://doi.org/10.1016/j.jece.2025.116657	Issue 3, Volume 13	116657	Online ISSN: 2213-3437 Print ISSN: 2213-2929
2.	Photochemical & Photobiological Sciences	Improved Photoinduced Charge Carrier Separation through the Built-in Electric Field in a Rationally Designed Ag-ZnMn2O4 /exfoliated g-C3N4, a Plasmonic p-n Junction for Solar-driven Reduction of Dissolved Cr(VI).	August, 2025	**Neha Gupta**, **Soumya Kanti Biswas,** Arpita Sarkar	https://doi.org/10.1007/s43630-025-00769-w			Online ISSN: 1474-9092
3.	Journal of Porous Material	Aqueous synthesis of mesoporous	December, 2023	**Neha Gupta, Arpita Sarkar,** Bibek	https://doi.org/	Volume 31	597	Electronic ISSN: 1573-

		$FeNbO_4$ for efficient degradation of organic contaminants in sunlight assisted advanced oxidation process at near neutral pH		Chettri, Bikash Sharma & Soumya Kanti Biswas	10.1007/s10934-023-01537-w			4854 Print ISSN: 1380-2224
4.	Engineering Proceeding	Hydrothermal Synthesis of Mesoporous $FeTiO_3$ for Photo-Fenton Degradation of Organic Pollutants and Fluoride Adsorption	December 2023	**Neha Gupta,** Arpita Sarkar, Bivek Pradhan, **Soumya Kanti Biswas**	https://doi.org/10.3390/engproc2023059134	Volume 59	134	ISSN: 2673-4591
5.	Journal of Molecular Structure	Bimodal Mesoporous α-Fe_2O_3/SiO_2 Composite: A Highly Efficient Heterogeneous Solar-Driven Photo-Fenton Catalyst.	July 2023	**Arpita Sarkar**, Neha Gupta, Soumya Kanti Biswas	https://doi.org/10.1016/j.molstruc.2023.135373	Volume 1284	135373	Online ISSN: 1872-8014 Print ISSN: 0022-2860
6.	Catalysis in Industry	Mesoporous Zirconium-Niobium Mixed Oxide ($Zr_6Nb_2O_{17}$): An Effective Catalyst Towards Bromination of Phenol Red Reaction.	June 2020	**Arpita Sarkar,** Soumya Kanti Biswas	https://doi.org/10.1134/S2070050420020075	Volume 12	110 – 118	Electronic ISSN 2070-0555 Print ISSN 2070-0504

7.	Journal of Physical Chemistry C	Well-Organized Mesoporous TiO_2 Photoelectrodes by Block Copolymer-Induced Sol-Gel Assembly for Inorganic-Organic Hybrid Perovskite Solar Cells	March 2014	**Arpita Sarkar,** Nam Joong Jeon, Jun Hong Noh, **Sang Il Seok**	https://doi.org/10.1021/jp412655p	Issue 30, Volume 118	16688–16693	Online ISSN: 1932-7455 Print ISSN: 1932-7447
8.	Nature Photonics	Efficient Inorganic-Organic Hybrid Heterojunction Solar Cells Containing Perovskite Compound and Polymeric Hole Conductors	May 2013	**Jin Hyuck Heo,** Sang Hyuk Im, Jun Hong Noh, Tarak N. Mandal, Choong-Sun Lim, Jeong Ah Chang, Yong Hui Lee, Hi-jung Kim, Arpita Sarkar, Md. K. Nazeeruddin**, Michael Grätzel, Sang Il Seok**	https://doi.org/10.1038/nphoton.2013.80	Volume **7**	486 – 491	Online ISSN 1749-4893 Print ISSN 1749-4885
9.	Journal of Non-Crystalline Solids	A New and Facile Route to Prepare Mesoporous Tantalum Oxophosphate with High Surface Area using Tantalum Tartrate Precursor	November 2010	**Arpita Sarkar, Panchanan Pramanik**	https://doi.org/10.1016/j.jnoncrysol.2010.09.047	Issues 50–51 Volume 356,	2709-2713	Online ISSN: 1873-4812 Print ISSN: 0022-3093
10.	Journal of Molecular	Investigation of the	July 2010	**Arpita Sarkar,**	https://	Issues 1–	73-	ISSN:

	Catalysis A: Chemical	Catalytic Efficiency of a New Mesoporous Catalyst SnO_2/WO_3 towards Oleic Acid Esterification,		Sudip K. Ghosh, **Panchanan Pramanik**	doi.org/10.1016/j.molcata.2010.05.015	2 Volume 327,	79	0304-5102
11.	Talanta	Studies on the Gas Sensing Behaviour of Nanosized $CuGaO_4$ towards Ammonia, Hydrogen and Liquefied Petroleum Gas		**Soumya Kanti Biswas**, Arpita Sarkar, Amita Pathak, **Panchanan Pramanik**	https://doi.org/10.1016/j.talanta.2010.03.010	Issues 4–5 Volume 81,	1607-1612	Online ISSN: 1873-3573 Print ISSN: 0039-9140
12.	Journal of Materials Chemistry	Design of A New Nanostructure Comprising Mesoporous ZrO_2 Shell and Magnetite Core (Fe3O4@mZrO2) and Study of Its Phosphate Ion Separation Efficiency	April 2010	**Arpita Sarkar,** Soumya Kanti Biswas, **Panchanan Pramanik**	https://doi.org/10.1039/B925379C	Issue 21, Volume 20	4417-4424	Online 1364-5501 Print 0959-9428
13.	Microporous and Mesoporous Materials	Synthesis of Mesoporous Niobium Oxophosphate using Niobium Tartrate	January 2009	**Arpita Sarkar, Panchanan Pramanik**	https://doi.org/10.1016/j.micromeso.2008.0	Issue 3, Volume 117	580 – 585	Online ISSN: 1873-3093 Print

		Precursor by Soft Templating Method			8.001			ISSN: 1387-1811
14.	Microporous and Mesoporous Materials	A Novel Sol-gel Synthesis of Mesoporous ZrO_2-MoO_3/WO_3 Mixed Oxides	November 2008	**Arpita Sarkar,** Susmita Pramanik, Amitava Achariya, **Panchanan Pramanik**	https://doi.org/10.1016/j.micromeso.2008.02.015	Volume 115	426 – 431	Online ISSN: 1873-3093 Print ISSN: 1387-1811

3. Book chapter:

Sl. No.	Title of the book	Publishers	Author(s) Name (Highlight the corresponding and 1st author in every article)	Year	ISBN No.	doi no. (if applicable)

4. Text/Reference book published from reputed national/international publishers:

Sl. No.	Title of the Text/Reference book	Publishers	Author(s) Name (Highlight the corresponding and 1st author in every article)	Year	ISBN No.	doi no. (if applicable)
	NA					

5. Project granted:

Sl. No	Sponsoring Agency	Name of the project	Duration		Amount in Lakhs	PI/ CO-PI
			Starting Month & Year	Ending month & Year		

	NA					

6. **Consultancy Project Grant:**

Sl No.	Project title	Funding Agency	Duration	Completed (yes/no)	Sanctioned amount (in Rs.)	PI and CO-PI (if any)
	NA					

7. **Patent/IPR granted:**

Sl. No.	Name of the patent	Name of the applicant	Name of the inventor	Date of File	Date of Publication	Whether Granted (yes/no); If yes, Date of Grant	Application No.
NA							

8.