NITER



Md. Didarul Islam

Applied Chemistry and Chemical Engineering

Bio

Md. Didarul Islam is working as a Lecturer in the Department of Applied Chemistry and Chemical Engineering at National Institute of Textile Engineering and Research (NITER). He received his BSc and MSc from Department of Applied Chemistry and Chemical Engineering, University of Dhaka, Bangladesh. His research interests include biopolymer based conductive material fabrication, biopolymer and bio-composites fabrication and their application for ecofriendly smart device application, dye sensitized solar cell and waste management.

Education

Degree Name	Group/Major Subject	Board/Institute	Country	Passing Year
MSC.	Applied Chemistry and Chemical Engineering	University of Dhaka	Bangladesh	2015
BSc.	Applied Chemistry and Chemical Engineering	University of Dhaka	Bangladesh	2014
HSC	Science	Chittagong City College	Bangladesh	2009
SSC	Science	Chakaria Korak Biddyapith	Bangladesh	2007

Experience

Job Title	Organization	Location	From Date	To Date
Lecturer	National Institute of Textile Engineering and Research	Nayarhat, Savar, Dhaka, 1350	October 2021	Present
Analyst	Ha-Meem Group	Tongi, Bangladesh	June 2020	September 2021
Executive (R&D)	Orion Pharma	Tejgaon, Bangladesh	May 2019	March 2020
Officer (R&D)	Renata Limited	Rajendrapur, Gazipur, Bangladesh	January 2017	March 2018

Research Activities

Research Interest

Subject	Description	Research Interest (Goal/Target Indicator)
Wastewater treatment	Membrane technology, Composite preparation, and their application.	
Material Science	Composite preparation and their application.	
Analytical Chemistry	Method development and method validation of analytical processes.	

Project/Research Supervision

Level of Study	Title	Supervisor	Co-Supervisor(s)	Name of Student(s)	Area of Research	Current Completion
	Degradation of textile dye by the 2D g-C_3N_4 heterogeneous photocatalyst	Md. Mahabub Hasan	Md. Didarul Islam M. Mehedi Hasan	Md. Sajib Hossain Md. Mehedi Hasan Utsha Chakraborty Nasif Yasir Hossain Chowdury Tamanna Akhter Shoudho	Synthesis of g-C_3N_4 from urea under thermal treatment (Pyrolysis method) process and its application for textile dye degradation.	Completed

	Material Synthesis and their application	Md. Didarul Islam	Md. Mahabub Hasan	Md. Hadiuzzaman Mollick Ahmed Mohibush Shakir Prianka Md.Salauddin Runa Akter	Material Synthesis and their application	Ongoing

Project/Research Work

Subject	Project Name	Source of Fund	From Date	To Date	Collaboration
	Non-Toxic Ionic Crosslinked Graphitic Carbon Nitride-Alginate Based Thermally Stable Biodegradable Transparent Films for Efficient UV and High Energy Blue Light Shielding.	Self-fund	2022	2022	Indian Institute of Technology Delhi Jashore University of Science and Technology Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj
	Facile synthesis of biodegradable layer-by-layer assembled calcium alginate-chitosan film through the incorporation of GCN for edible food coating application	Self-fund	2022	2023	Indian Institute of Technology Delhi Jashore University of Science and Technology Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj

Publications

Journal Article

SL. No-	Article Name	Link
01	Production of cost-effective activated carbon from tea waste for tannery wastewater treatment.	Applied Water Science (Springer, IF: 5.411) https://doi.org/10.1007/s13201-023-01879-5
02	Hazard Estimations Result from Arsenic Contamination in Common Foodstuffs, Soil, Sediment, and Water of Joypurhat District, Bangladesh	Pollution (University of Tehran, IF: 1.55) 10.22059/POLL.2022.347351.1578
03	Effect of Pressure on the Superconducting Transition Temperature and Physical Properties of $CaPd_2P_2$: A DFT Investigation.	ACS Omega (ACS, IF: 4.132) https://doi.org/10.1021/acsomega.2c01088
04	Assessing the Effectiveness and Environmental Sustainability of Reactive Dyes for Their Structural Diversity	Textile & Leather Review https://doi.org/10.31881/TLR.2022.02
05	Treatment of Tannery Wastewaters Discharged from Different Chemical Operations using Aluminium Chloride.	Environmental Degradation: Monitoring, Assessment, and Treatment Technologies (Springer) 10.1007/978-3-030-94148-2_1
06	Removal of Cr (III) and other pollutants from tannery wastewater by *Moringa stenopetela* seed.	IOP Conference Series: Earth and Environmental Science 10.1088/1755-1315/644/1/012025
07	Biopolymer-based electrolytes for dye-sensitized solar cells: A critical review.	Energy & Fuels (ACS, IF: 4.654) https://doi.org/10.1021/acs.energyfuels.0c03396
08	Translocation and bioaccumulation of trace metals from industrial effluent to locally grown vegetables and assessment of human health risk in Bangladesh.	SN Applied Sciences (Springer Nature, IF: 2.11) https://doi.org/10.1007/s42452-020-3123-3
09	Removal of Chromium (III) and Other Physical Parameters from Chrome Tan Wastewater and Recovery of Chromium from the Precipitating Sludge	Textile & Leather Review https://doi.org/10.31881/TLR.2020.07
10	Removal of chromium from aqueous solution using chitosan: An experimental study	Bulgarian Chemical Communications 10.34049/bcc.51.4.5141
11	Analytical Method Validation of Testosterone Undecanoate Soft Gelatin Capsule by RP-HPLC Method	Journal of Developing Drugs 10.4172/2329-6631.1000184
12	Toxic effects of the endocrine disrupter on plants.	Current Developments in Biotechnology and Bioengineering (Elsevier) https://doi.org/10.1016/B978-0-323-91902-9.00003-1
13	Chitosan-Based Gels for Ocular Drug Delivery.	Marine Biomaterials: Drug Delivery and Therapeutic Applications (Springer Nature) 10.1007/978-981-16-4787-1_9
14	Evaluation of micro-pollutants removal from industrial wastewater using	Biodegradation and Detoxification of Micropollutants in

	conventional and advanced biological treatment processes.	Industrial Wastewater (Springer) https://doi.org/10.1016/B978-0-323-88507-2.00011-7
15	Biological Wastewater Treatment Plants (BWWTPs) for Industrial Wastewater.	Wastewater Treatment (Taylor & Francis) https://doi.org/10.1201/9781003165057
16	Radiation-processed polysaccharides in food production, preservation, and packaging applications.	Radiation-Processed Polysaccharides (Elsevier) https://doi.org/10.1016/B978-0-323-85672-0.00002-7

Award

Award Type	Title	Year	Country	Description
	National Science and Technology Fellowship	2016	Bangladesh	This award was achieved during Master`s Program
	Fazlul Haq Muslim Hall Scholarship	2015	Bangladesh	This award was achieved due to outstanding performance in B. Sc. Result.

Contact

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Institute – Faculty
Name of the Department: Electrical & Electronic Engineering
Position: Lecturer