

**SHARMIN SULTANA**  
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## **AREAS OF SPECIALIZATION**

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Soil and Environment, Waste water management and Environmental chemistry.

## **CURRENT POSITIONS**

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2017/ Oct.– present      Senior Scientific Officer, Institute of Mining, Mineralogy and Metallurgy, BCSIR, Joypurhat.

## **PREVIOUS POSITIONS**

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2017/ Jul.- 2017/Oct.      Senior Scientific Officer, Leather Research Institute (LRI), BCSIR, Nayarhat, Savar.

2016/ Mar.- 2017/Jul.      Scientific Officer, Institute of Glass & Ceramics Research and Testing (IGCRT), BCSIR, Dhaka.

2010/Jun.- 2016/Mar.      Scientific Officer, Institute of Mining, Mineralogy and Metallurgy, BCSIR, Joypurhat.

2009/May- 2010/Feb      Overseer, Water Management Improvement Project (WMIP) under Bangladesh Water Development Board, Lalmatia, Dhaka.

2008/Apr. - 2008/Oct.      Assistant Teacher (Geography), Dhaka Eastern School & College, Dhaka.

## **EDUCATION**

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2004      M. S. (Thesis group & Major in Water Science), Department of Soil, Water & Environment, University of Dhaka, Bangladesh.  
Thesis: *Requirement of Water by different Crops and Accumulation of Arsenic in them*

2003      B.Sc., Department of Soil, Water & Environment , University of Dhaka, Bangladesh.

## DEVELOPED PROCESS

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### Process

- 2019 “Preparation of Zeolite from rice husk ash”- Madhu Sudan Saha, Md. Anwar Arfien Khan, Tamjiz-Us-Sakib and **Sharmin Sultana**, accepted on 18/04/2019 (Ref no: 39.02.0000.043.37.164.18/879).
- 2017 “Preparation of Aluminium alum from the wastes of aluminium utensil industry” - Madhu Sudan Saha, Md. Anwar Arfien Khan, **Sharmin Sultana**, Aninda Nafis Ahmed and Pranab Kumar Nandy, accepted on 15/05/2017 (Ref no: 39.373.037.09.00.292.2016/903).

## PUBLICATIONS

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### Journal Article:

#### **International Journal**

- 2018 “Water Quality of Coal Ash Pond and Its Impact on Adjoining Surface and groundwater Systems” Sakib T.U, **Sulana S\***, Ahmed A.N., Khan M.A.A and Saha M.S. American Journal of Water Resources, 2018, vol. 6, No. 4, pp 176-180.
- 2017 “Assessment on Water Quality of Waste Water in Sugar Industry and Its Impact on Environment.” **Sharmin, S\***, Ahmed, A.N., Sultana, M.S., Biswas, P.K., Saha, B., Alam, S. Open Access Library Journal, 2017, vol. 4, e3455
- 2017 “Characterization of Coal Spoil Recovered from Coal Mine Drainage Water” Ahmed, A.N., Khan, M.A.A Saha, M.S., and **Sultana,S**. International Journal of Geoscience and Environment Protection, 2017, vol. 5, pp 227-236
- 2017 “ Evaluation of heavy metal pollution indices in irrigation and drinking water systems of Barapukuria coal mine area, Bangladesh” Biswas, P.K., Uddin, N., Alam, S., Sakib, T.U., **Sharmin, S.**, Ahmed,T. American journal of water resources, 2017, vol. 5, No.5,pp 146-151.
- 2016 “Risk Factor Assessment of Coal Mine Drainage Water on Surrounding Agricultural Soil: A Case Study at Barapukuria in Bangladesh ” **Sharmin, S.**, Biswas, P.K., Rahman, M.A., Sultana, M.S., and Zaman, M.N. Journal of Geoscience and Environment Protection, 2016, vol. 4, pp 7-17
- 2013 Coal fly ash of Barapukuria thermal power plant,Bangladesh: physico chemical properties assessment and utilization” Khan, M.A.A., Saha, M.S., **Sultana,S.**, Ahmed, A.N., and Das, R.C. International Journal of scientific & engineering resources, 2013, vol. 4, issue 11, pp 1456-1460

### National Journal

- 2016 “Preparation and characterization of white carbon black from rice husk” Khan, M.A., Saha, M.S., **Sultana, S** and Ahmed, A.N. Journal of Environmental Science & Natural Resources, 2016, vol. 9 No.2 pp 1-7.
- 2015 “Arsenic accumulation in crops in relation to their water requirement” **Sultana, S.**, Rashid, M.H., and Huq, S.M.I. Bangladesh Journal of Scientific Research, 2015, vol. 28(2) pp 171-180.

### CONFERENCE PROCEEDINGS

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- 2017 “Environmental aspects of coal ash pond water: surface and ground water contamination”, Khan A. A., Sakib T. U, Ahmed A. N and **Sultana S\***., Symposium on Environmental Chemistry for Securing Water Quality, Bangladesh journal of Scientific and Industrial Research, 52(special issue), 20, 2017. (Abstract)
- 2016 “ A cost effective method for the treatment of sugarmill waste water” **Sultana\*,S.**, Nandy, P.K., Saha, M.S., Zaman, M.N. 16<sup>th</sup> Asian Chemical Congress, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh. March 16-19, 2016, (Abstract)
- 2015 “Characterization and utilization of coal spoil recovered from coal mine drainage water ” Ahmed, A.N., **Sultana, S.**, Saha, Das, R.C., M.S., and Khan, M.A.A. 11 April, 2015, 37<sup>th</sup> Annual conference, Bangladesh Chemical Society, Comilla University, Comilla, Bangladesh (Abstract)
- 2014 “ Comprehensive characterization and utilization scope of coal fly ash of Barapukuria thermal power plant, Bangladesh” Ahmed, A.N., Das, R.C., **Sultana, S.**, Saha, M.S., and Khan, M.A.A. 1-2 March, 2014, 36<sup>th</sup> Annual conference of Bangladesh chemical society, Hazi Mohammad Danesh University of Science and Technology, Dinajpur, Bangladesh (Abstract).

### LIST OF R&D PROJECTS

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- 2018-2019 Preparation of adsorbent from waste material of Sawmill. (Project Leader)
- 2017-2018 Preparation of Zeolite from rice husk ash. (Project associate)
- 2016-2017 Development of a cost effective metallurgical technique for industrial waste treatment. (Project associate)
- 2015-2017 Environmental Aspects of Coal Ash Pond Water: Surface and Ground Water Contamination. (Project Leader)
- 2015-2017 Preparation of white carbon black from rice husk. (Project associate)

- 2015-2016 A cost effective treatment method for the waste water of Joypurhat sugar mill. (Project Leader)
- 2015-2016 Characterization and utilization of coal spoil recovered from coal mine drainage water. (Project associate)
- 2015-2016 Preparation of Aluminium alum from the wastes of aluminium utensil industry (Project associate)
- 2010-2014 Determination of coal mine drainage water quality, its effects on soil and environment and remedial measures. (Project associate)
- 2010-2012 Preparation of Cryolite from the coal fly ash of Barapukuria thermal power plant, Bangladesh. (Project associate)

#### **SPECIAL ALLOCATION PROJECT**

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- 2017-2018 Utilization of locally available waste materials to produce self glaze ceramic tiles. Granted by ministry of Science & Technology, Government of Bangladesh. (project associate)

#### **FELLOWSHIPS AND AWARDS**

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- 2017 Scholarship for PhD program in Bangladesh, Title: "Suitability of treated effluent water for irrigation in crop production" (University of Dhaka, Dept of Soil, Water and Environment) granted by Bangabandhu Science & Technology fellowship trust, Ministry of Science and Technology, Bangladesh.

#### **TRAINING/ WORKPLACE INFORMATION**

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- 23 Aug. 2015 -03 Sep, 2015 Training on 'Office Management' at National Academy for Planning and Development (NAPD), Nilkhet, Dhaka.

#### **MEMBERSHIP OF SCIENTIFIC BODIES**

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Soil Science Society of Bangladesh