

MST. SHANJIDA SULTANA

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Present Address : Institute of Mining, Mineralogy and Metallurgy (IMMM),
Bangladesh Council of Scientific and Industrial Research (BCSIR), Science Laboratory Road,
Khonjonpur, Joypurhat 5900, Bangladesh

Google scholar web page : <https://scholar.google.com/citations?user=Ig0HsvAAAAAJ&hl=en>

Research gate profile : https://www.researchgate.net/profile/Mst_Sultana2

RESEARCH INTERST : Waste utilization, Construction and ceramic materials, Clay mineralogy, Soil and Environment

WORK EXPERIENCES

Senior Scientific Officer
(24th July, 2017 –
continuing)
Institute of Mining, Mineralogy and Metallurgy (IMMM), Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
Key responsibilities:
Performing research works
Research and Development, Rendering analytical and testing services to the industries, Equipment maintenance

Visiting Scientist
(15th February –
17th May, 2019)
CSIRO, Melbourne, Australia
Key responsibilities:
Performing research works under the supervision of a senior scientist
Undertake review of tailings management and mine rehabilitation programs of mining and mineral processing area.

Scientific Officer
(30th June, 2010-
23th July, 2017)
Institute of Mining, Mineralogy and Metallurgy (IMMM), Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
Key responsibilities:
Performing research works under the supervision of a senior scientist.
Research and Development, Carrying out routing maintenances of the research equipment and lab facilities.

EDUCATION

M. S. (Master of Science with thesis)

University of Dhaka, Bangladesh

Department of Soil, Water & Environment (Major in Environmental Science)

B.Sc.(Bachelor of Science)

University of Dhaka, Bangladesh

Department of Soil, Water & Environment

PUBLICATIONS

JOURNAL ARTICLES:

- **Mst. Shanjida Sultana**, Aninda Nafis Ahmed, Mohammad Nazim Zaman, Md Aminur Rahman “Utilization of Hard Rock Dust in Ceramic Glaze Formulation” *IOP Conference Series: Materials Science and Engineering* , 438(1).012018(2018)
- **Mst. Shanjida Sultana**, Mohammad Nazim Zaman, Md. Aminur Rahman, Pradip Kumar Biswas ,Pranab Kumar Nandy, ‘Mineralogical and Physical Characterization of Clay of Sitakunda Anticline: Used for Ceramic Industries.’ *Journal of Minerals and Materials Characterization and Engineering*, 2018, 6(3), 333-344 (DOI: 10.4236/jmmce.2018.63023)
- Sharmin Sultana, Aninda Nafis Ahmed, **Mst. Shanjida Sultana**, Pradip Kumar Biswas, Badhan Saha, Sha Alam. “Assessment on Water Quality of Waste Water in Sugar Industry and Its Impact on Environment”. *Open Access Library Journal*, Volume 4: e3455, (2017).(<https://doi.org/10.4236/oalib.1103455>)
- Tamjid-Us-Sakib and **Mst. Shanjida Sultana**. Assessment of Heavy Metals Contamination of Agricultural Field around Brick Kilns in Joypurhat District, Bangladesh. *International Journal of Science and Engineering Investigations* _vol. 6, issue 70 (2017)
- Sharmin Sultana, Pradip Kumar Biswas, Aminur Rahman, **Mst. Shanjida Sultana**, Mohammad Nazim Zaman. “Risk Factor Assessment of Coal Mine Drainage Water on Surrounding Agricultural Soil: A Case Study at Barapukuria in Bangladesh ”. *Journal of Geoscience and Environment Protection*, 2016, 4, 7-17 (<http://dx.doi.org/10.4236/gep.2016.42002>)
- **Mst. Shanjida Sultana**, Mohammad Nazim Zaman, Md. Aminur Rahman, Aninda Nafis Ahmed Influence of Calcination on Different Properties of Sugarcane Bagasse and Waste Ash., *J. of Scientific Research* 7(3),151-157(2015).(doi: <http://dx.doi.org/10.3329/jsr.v7i3.23523>)
- **Mst. Shanjida Sultana**, Aninda Nafis Ahmed, Mohammad Nazim Zaman, Md. Aminur Rahman,Pradip Kumar Biswas , Pranab Kumar Nandy, “Utilization of Hard Rock dust with red clay to produce roof tiles”. *Journal of Asian Ceramic Societies*. 3(1), 22-26 (2015) (<http://dx.doi.org/10.1016/j.jascer.2014.10.005>.)
- **Mst. Shanjida Sultana**, Md. Imran Hossain, Md. Aminur Rahman, Majharul Haque Khan. “Influence of Rice husk ash and Fly ash on Properties of Red Clay.” *Journal of Scientific Research*,6 (3), 421-430 (2014) (<http://dx.doi.org/10.3329/jsr.v6i3.15343>.)

- Md. Aminur Rahman, Pradip Kumar Biswas, Mohammad Nazim Zaman, **Mst. Shanjida Sultana**, Economic Viability of the Tista River Sand Deposits in Bangladesh -An Overview. *J. Sci. Res.* 9 (2), 219-233 (2017) doi: <http://dx.doi.org/10.3329/jsr.v9i2.30374>
- Md. Aminur Rahman, Pradip Kumar Biswas, Mohammad Nazim Zaman, **Mst. Shanjida Sultana**, Pranab Kumar Nandy, “Physical Separation for Up gradation of Valuable Minerals from the Sand of Someswari River” *Bangladesh J. Sci. Ind. Res.* 50 (1), 53-58, (2015).
- **Mst. Shanjida Sultana**, M. Harunur Rashid and S.M. Imamul Huq. Interaction of Phosphorus with Arsenite [As(III)] and Arsenate [As(V)] in Soil.” *Bangladesh journal of soil science.* 37(1) 47-56 (2015).
- Md. Aminur Rahman, Mohammad Nazim Zaman, Md. Nehal Uddin, Pradip Kumar Biswas, Mst. Shanjida Sultana. “Beneficiation of Ilmenite from Ultramafic lamprophyres of Mithapukur, Rangpur district of Bangladesh”. *International Journal of Mining Engineering and Mineral Processing*, 2(1):1-7(2013) DOI: <http://dx.doi.org/10.5923/j.mining.20130201.01>

PATENT:

- **Mst. Shanjida Sultana**, Aninda Nafis Ahmed, Mohammad Nazim Zaman, Md. Aminur Rahman, A Process for formulation of ceramic glaze from natural resources. Accepted by Department of Patents, Design and Trademarks, Government of Bangladesh. (Serial no-1005993)

CONFERENCES PROCEEDINGS/PRESENTATION

- **Mst. Shanjida Sultana**, Aninda Nafis Ahmed, Mohammad Nazim Zaman, Md Aminur Rahman “Utilization of Hard Rock Dust in Ceramic Glaze Formulation” at 4th International Conference on Structure, Processing and Properties of Materials on 1-3 March , 2018, BUET, Dhaka.
- **Mst. Shanjida Sultana**, Mohammad Nazim Zaman, Pradip Kumar Biswas, Md. Aminur Rahman, Possibility of Using Industrial Wastes with Portland cement to Develop Concrete. Presented at 15th Annual Conference of Bangladesh Ceramic Society held on 6 to 7th April ,2017 Dhaka.
- **Mst. Shanjida Sultana**, Aninda Nafis Ahmed, Mohammad Nazim Zaman, Md. Aminur Rahman, Physical and Micro Structural Properties of Ceramic Materials from Waste Materials. 1st International Conference on Engineering Materials and Metallurgical Engineering. BCSIR, Bangladesh. 22- 24 December, 2016.
- **Mst. Shanjida Sultana** and Aninda Nafis Ahmed. Utilization of Sugarcane Bagasse Ash for Manufacturing Ceramic Products. International Conference on Mechanical, Industrial and Materials Engineering, (ICMIME 2015), RUET, Rajshahi, Bangladesh ;11-13 December, 2015.
- **Mst. Shanjida Sultana**, Md. Imran Hossain. Md. Aminur Rahman and Majharul Haque Khan. 2013 “Assessment of the Industrial Potential of Red Clay Deposits by Incorporating Different Additives”, International Conference of Engineering, Research, Innovation and Education, 2013. SUST, Sylhet, Bangladesh ;11-13 January 2013.
- **Mst. Shanjida Sultana** and Md. Aminur Rahman. “Characterization of calcined sugarcane bagasse ash and sugarcane waste ash for industrial use.” International Conference on Mechanical, Industrial and Materials Engineering, (ICMIME 2013), RUET, Rajshahi Bangladesh, 1-3 November, 2013.
- **Mst. Shanjida Sultana**, Aninda Nafis Ahmed, Mohammad Nazim Zaman and Md. Aminur Rahman .Potentiality of Northern Red clay of Bangladesh in Ceramic Industry Incorporating Bagasse Ash. Presented at 14th Annual Conference of Bangladesh Ceramic Society held on 31st December, 2015 to 1st
- Majharul Haque Khan and **Mst. Shanjida Sultana**. Physical and high temperature studies of Shailpy clay (Naogaon) deposits for its potential use in ceramic industries. Presented in International conference on Physics of Today, Article ID: PCCM-III-B 10, Dhaka, Bangladesh, 15-17 March, 2012)

January 2016 at BCSIR, Dhaka. (Abstract)

PROJETS

- Characterization of Northern Clay Deposits of Bangladesh and Utilization of it in Ceramic Industries by Incorporating Waste material (Rock Dust, Bagasse Ash, Fly Ash). (Grant Special R&D Project, Ministry of Science and technology, Government of Bangladesh)(2014-15)
- Development of Pavement Tiles using different Industrial Wastes (stone dust/rock dust, fly ash, bagasse ash) with Portland cement (Grant R&D Project of BCSIR)(2017-18)
- A new concept to use hard rock dust in ceramic industries. (Grant R&D Project of BCSIR)(2016-17)
- Characterization of the Tertiary sediments of the Sitakunda Anticline, Chittagong Hill Tracts and its application in industry. (Grant R&D Project of BCSIR) (2015-16)
- Determination of coal mine drainage water quality, its effects on soil and environment and remedial measures. (Grant R&D Project of BCSIR)(2012-2013)
- Determination Geo-engineering properties and preparation of Gem Stones from Maddhapara Hard rocks. (Grant R&D Project of BCSIR)(2012-13)

PERSONAL SKILLS

TECHNICAL SKILLS AND EXPERTISE

- : Have knowledge on working and analysis in the following instrument:
XRF, X-ray diffractometer, Atomic Absorption Spectrometer, UV- Spectrophotometer, Flame Photometer, Fourier Transform Infrared Spectrometer, Particle size analyzer, Polarizing and Reflected Microscopic study on mineral identification, High temperature furnace, Cutting and grinding machines.
Have good professional level command on Microsoft office package

MEMBERSHIPS

- : Bangladesh Ceramic Society
Bangladesh Academy of Advance Science
Soil Science Society of Bangladesh