বাংলাদেশ আর্মি ইন্টারন্যাশনাল ইউনিভার্সিটি অব সায়েন্স এন্ড টেকনোলজি (বাইউস্ট), কুমিল্লা
BANGLADESH ARMY INTERNATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY (BAIUST), CUMILLA

001/Aca/Poster Presentation/01/2025 (Spring) Date: 03 June 2025

CALL FOR ABSTRACT: POSTER PRESENTATION COMPETITION

Ref.: 001/Aca/30/Board Committee Dated 31 May 2025

1. With reference to the above, a Committee has been formed to organize the Poster Presentation Competition for Semester 01/2025 (Spring). In this context, the Committee is now **Calling for Abstract Submissions** from students of different departments of BAIUST based on their ongoing thesis or project work. The following guidelines must be followed while preparing the abstract for the presentation:

a. Each poster must be presented **team-wise**. Each team should consist of **3–4 members**, including one **team leader** (corresponding author). Team members should primarily be selected from **Level-4, Term-I** and **Level-4, Term-II** students. However, a **maximum of one team member** may be selected from students other than Level-4, if there are insufficient eligible students in the department.

b. Each department will nominate **3–5 potential abstracts** from their students.

c. All abstracts must follow the prescribed "**Guidelines and Sample Abstract**" attached herewith (Annexure A).

d. All nominated abstracts must be submitted through the respective departments to the following email address: **director.rpc@baiust.ac.bd** by **17 June 2025**.

2. Detailed guidelines for the Poster Presentation, evaluation criteria, and general instructions will be circulated in due course.

3. This is for your kind information, wide dissemination among students, and necessary prompt action please.

Md. Nazrul Islam
Associate Professor (Physics)
Director (Acting), R & P Cell
& President of the Committee

Attachment:
Annexure A: Guidelines and Sample Abstract

Action:
All Departments
All Notice Boards

Information:
Vice Chancellor Office
Registrar Office

Annexure A

Guideline for Abstract Submission

Department: EEE/CSE/CE/English/Law/DBA **Thematic Area:**

Title (Times New Roman, 12 Font, Bold, Center align)

Authors (Times New Roman, 11 Font, Italic, Center align)
Affiliations (Times New Roman, 11 Font, Italic, Center align, for multiple affiliations use number)
**Corresponding Email (Times New Roman, 11 Font, Italic, Center align)*

The abstract should contain the following components: Objectives, Methods, Results, and Conclusions. The body of the abstract should be written in Times New Roman, 12 Font, Justify. Maximum word limit: 250 words. A sample abstract is given below.

Department: EEE Thematic area: Nanoscience and Technology

Synthesis of Sillenite-type Bismuth Ferrite Photocatalysts to Remove Pollutants from Wastewater

N. Alam, M. Hasan, M.N. Islam, and M. Chowdhury*

Department of Electrical and Electronic Engineering, Bangladesh Army International University of Science and Technology, Cumilla.

**Corresponding E-mail:* ----------

The objective of this investigation is to synthesize sillenite-type bismuth ferrite nanoparticles and apply them towards the removal of industrial and pharmaceutical pollutants form wastewater using solar energy. Sillenite phase bismuth ferrite nanoparticles were synthesized by low temperature and cost-effective hydrothermal technique at a lower reaction temperature of 120-160 °C via co-substitution of 10% Gd and 10% Cr. The as-synthesized samples were characterized by X-ray diffraction, field emission scanning electron microscopy and transmission electron microscopy imaging, X-ray photoelectron, UV-visible, and photoluminescence spectroscopy analyses. The as-synthesized sillenite compounds exhibited promising photocatalytic performance towards the degradation of RhB, MB and CIP. More specifically, the sillenite-type photocatalyst synthesized at 160 °C displayed higher photocatalytic efficiency compared to other synthesized compounds as well as un-doped and mono-doped perovskite bismuth ferrite nanoparticles synthesized under similar hydrothermal conditions. The sample also exhibited excellent reusability and stability up to five consecutive cycles of photodegradation. Gd and Cr co-doping has proved to be a facile and low-cost approach for the formulation of sillenite-phase bismuth ferrite with promising photocatalytic activity. From an economic perspective, such an energy-efficient production of bismuth ferrite photocatalyst is appealing, and it shows potential to be used in purifying contaminated water supplies.