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FOR FURTHER CLARIFICATION

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**Council of Scientific and
Industrial Research (CSIR)**

sponsored

**NATIONAL CONFERENCE ON
New-Generation Materials for Energy**

Applications

21st & 22nd OCTOBER 2019



Organized by

DEPARTMENT OF PHYSICS

**B.S. Abdur Rahman Crescent Institute of
Science & Technology**

Deemed to be University u/s 3 of UGC Act, 1956

Vandalur, Chennai 600 048

Tamil Nadu, India

ABOUT THE INSTITUTION

B.S.Abdur Rahman Crescent Institute of Science and Technology, a deemed to be University, previously acclaimed as B.S.A.Crescent Engineering College, blossomed into a premier institution for higher education and learning in the year 2009. Being an anchor institution in Chennai, it has attracted many students nationwide. The University was accredited with grade 'A' by NAAC. The University envisages to uphold excellence in its entire three dimensional focal areas namely Education, Research and Consultancy. This has created a vivacious and conducive ambience for the staff and students to pursue research, which would be beneficial to the society and humanity at large. Located in the suburb of Chennai, on a sprawling green campus with scenic beauty, the University is dedicated to educate and empower students through intensive exploration of core courses in Science, Engineering, Management and Technology. All the laboratories of the departments are well equipped with state-of-the-art equipments. Many of the UG and PG programmes have been accredited by NBA. More than 580 scholars are pursuing Ph.D / M.S programme in this Institution. The Quality Management System of the college conforms to the ISO standards and certified accordingly by the Det Norske Veritas (DNV), Netherland.

ABOUT THE DEPARTMENT

The Department of Physics was established in the year 1984 to impart knowledge in Physics. It has good infrastructure facilities with excellent faculty members doing research in various fields of science. Physics department offers research programme in major areas such as Laser Technology, Nonlinear Optics, Nanomaterials, Crystal Growth, Thin Film Technology, Nonlinear Dynamics and Computational Materials Science. The department offers Ph.D and M.Sc. programmes in Physics. The department is equipped with sophisticated instruments such as Nd: YAG laser, PLD, Fluorescence spectrophotometer, P-E loop tracer, Autoclave and High Temperature Furnace. Every year the department provides research fellowship to the research scholars for a period of three years.

ABOUT THE CONFERENCE

The current global need for clean and renewable energy sources, drives the entire world towards the search for the way and means for this type of energy sources. Reliable electricity is on demand by millions of people. In order to meet the energy challenge, scientific and technological breakthroughs and

advances are imperative. Enormous research is being carried out around the world to investigate clean, sustainable and renewable energy which is cheap. Among the renewable energy sources, specifically solar power, can be extremely practical as alternatives to carbon-intensive fuels which pollute the environment and also very costly. In this forum, the latest fundamental and applied research advances on renewable energy sources and the materials for energy will be discussed.

The major conference topics are

Solar Energy Conversion

- ✦ Perovskite solar cells
- ✦ Organic photovoltaics
- ✦ Other photovoltaic technologies

Energy Storage

- ✦ Electrochemical energy storage and conversion materials, including Li-ion batteries and new storage materials
- ✦ Grid-scale storage, including flow batteries

Nanocatalysis

- ✦ HER, OER, ORR
- ✦ CO₂ reduction to CO, CH₄, and methanol
- ✦ N₂ reduction to ammonia
- ✦ Single-atom catalysis

Gas Storage and Activation (CO₂, H₂, Natural Gas)

- ✦ Metal organic framework
- ✦ Covalent organic frameworks
- ✦ Zeolites

And not limited to these topics.

Any other topics related to the conference title are most welcome.

CALL FOR PAPERS

Participants are requested to submit their research papers to the Convenor as attachment file to the e-mail address bsacuphy@gmail.com in MS word format. Kindly ensure that all the attachments are virus free. Otherwise, a hard copy of their research paper along with the copy of the same in CD should be sent to the Convenor.

GUIDELINES FOR PREPARATION OF MANUSCRIPT

Research papers should fit to A4 paper leaving 25 mm margin on all sides.

Times New Roman and font size 12 should be used for the text.

Title of the paper should be bold in font size 14.

Title and the author's name should be centered.

Figures should be suitably reduced and placed at appropriate places.

The full research paper should be limited to a maximum of three pages.

The selected papers would be published in the proceedings (with ISBN), which would be released during the conference.

ORAL / POSTER PRESENTATION

Authors of poster presentation are requested to use adequate font sizes so as to read the posters from a distance of 1m.

The display area for each poster is 1x1 m. Authors of oral presentation are requested to have power point presentation.

REGISTRATION

All participants whose papers are accepted should register and pay the registration fee on or before **05.10.2019**. The manuscripts of the registered participants alone will be printed in the proceedings. The participants without papers may also register on or before 05.10.2019. The details of registration fee are

1. Academicians	Rs. 750
2. Industry	Rs. 1500
3. Students/Research Scholars	Rs. 500

Registration fee is payable in advance by Demand Draft drawn in favour of “Department of Physics, B. S. Abdur Rahman Crescent Institute of Science & Technology” payable at Chennai. The DD along with the registration form should reach the convener on or before **05.10.2019**. The Brochure and the Registration form can be downloaded from the University website: www.crescent.education. Account transfer details: Indian Overseas Bank, A/c No. 165701000008419, IFSC code: IOBA0001657 in favour of “Department of Physics, B. S. Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai – 600 048”

ACCOMMODATION

Accommodation will be provided only to the outstation participants on request in the hostels within the university campus at nominal rate. For accommodation, contact Dr. V. Mahalingam, Asst. Prof. Ph. 8760313707.

IMPORTANT DATES

Research paper submission opens	: 20.07.2019
Last date for paper submission	: 30.09.2019
Intimation of acceptance (by e-mail):	03.10.2019
Last date for registration	: 05.10.2019



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TOPICS FOR THE CONFERENCE

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Nanocatalysis

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Gas Storage and Activation (CO₂, H₂, Natural Gas)

- Metal organic framework
- Covalent organic frameworks and Zeolites

Nanomaterials and Materials Processing

- Advances in Nanomaterials & Nanotechnology
- Ceramics and Composite Materials
- Advanced Materials Engineering
- Advanced biomaterials and devices
- Carbon Based Nanomaterials
- Coatings and Surface Engineering
- Polymers Science and Engineering
- Magnetic and spintronic Materials
- Functional Materials for Energy application & Energy storage
- Materials for Environmental Sustainability
- Materials Processing and characterization
- Metals, Metallurgy and Materials
- Non-Destructive Evaluation of materials and structures
- Advanced Optical and photonic Materials
- Electronic and Semiconductor materials
- Fabrication of smart devices and Sensors
- Micro-Nano fluids and applications