3rd International Conference on Surfaces, Coatings and Nanostructured Materials – ASIA

City University of Hong Kong
Hong Kong SAR, PR China

4-7 December 2017

PROGRAMME BOOKLET

www.nanosmat-asia.com

香港城市大學
City University of Hong Kong

11:10 - 11:30	**NANO-24: Prof. Nitosh Kumar Brahma**, Institute of Genetic Engineering, India *"Bidirectional Targeted Killing approach of Genetically Engineered Escherichia coli surface antigen(fimbriae) BNT (Bionanotube) to tumor cell by : A Molecular and Engineering Design Concept of Cancer Therapy"*	11:20 - 11:40	**NANO-5: Christian Laurence Aquino**, University of the Philippines Diliman, Philippines *"Synthesis of Hematite Nanostructures by Thermal Oxidation of Iron Sheet for Cr(VI) Adsorption"*
11:30 - 11:50	**NANO-27: Bryan A. Chin**, Auburn University, USA *"Immobilization of Nano Phage on Magnetoelastic Resonators to detect the Presence of Pathogens on Fresh Fruits and Vegetables"*	11:40 - 12:00	**NANO-60: BASIR SAYIDAH ASMA**, University of Malaya, Malaysia *"Nano Product: to Register or not to register?"*
11:50 - 12:10	**NANO-43(2): Makpal Seitzhanova**, The Institute of Combustion Problems, Kazakstan *"APPLICATION OF NANOCRYSTALLINE CALCIUM HYDROXYAPATITE IN 3D BIOPRINTING"*	12:00 - 12:20	**NANO-63: Hee Chul Woo**, Gwangju Institute of Science and Technology (GIST), Korea *"Optical and electrical characterization of CH3NH3PbBr3 Single Crystal"*
12:30 - 13:30	**Lunch**		
Time	**Session: Nanoenergy** **Chairperson: Nowshad Amin (Malaysia)** Room: LT03	**Time**	**Session: Surface science and engineering** **Chairperson: Piotr Wilczek (Poland)** Room: LT04
13:30 - 13:50	**NANO-61: Chris Yeajoon Bon**, Hanbat National University, Korea *"Lithium-silica nanosalt electrolyte additive for lithium-ion batteries and supercapacitors"*	13:30 - 13:50	**NANO-8: Mingdi Zhang**, Kyoto University, Japan *"A Molecular Dynamics Study of Tersoff 3C-SiC Surface with Tersoff Model"*
13:50 - 14:10	**NANO-67: Naresh Padha**, University of Jammu, India *"Development and characterizations of SnTexSe1-x (x=0.32) mixed phase materials ,thin films and schottky diodes for photovoltaic and optoelectronic device applications"*	13:50 - 14:10	**NANO-124: Byung-Koog Jang**, National Institute for Materials Science (NIMS), Japan *"Corrosive and Thermal Properties of ZrO2-Y2O3 Thermal Barrier Coatings"*
14:10 - 14:30	**NANO-98: Ying Liu**, Gyeongsang National University, Korea *"Enhanced Performance of Sulfurized Polyacrylonitrile Composite with Highly Ordered Mesoporous Structure for Advanced Lithium Sulfur Batteries"*	14:10 - 14:30	**NANO-32: ANIRUDDHA MOLLA**, University of Ulsan, Korea *"Sonochemical Dyes Removal using Iron-cobalt Sulphide@GrapheneOxide in Absence of Light"*
14:30 - 14:50	**NANO-101: ANUPRIYA K HARIDAS**, Gyeongsang National University, Korea *"Evaluation of sodium ion storage mechanism in carbonate and ether based electrolytes for carbon coated FeS anodes"*	14:30 - 14:50	**NANO-54: Min-Su Kwon**, Gyeongsang National University, Korea *"Effect of SrTiO3 buffer layer on ferroelectric properties of K(Ta0.60Nb0.40)O3 thin films"*

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Organising Committee:
Prof. Antonio ZAPIEN (Chair), City University of Hong Kong, HK SAR (PR China)
Prof. Sining Yun (Co-Chair), Xi'an University of Architecture and Technology (PR China)
Dr. Nasar Ali, The NANOSMAT Society (UK)

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THE NANOSMAT SOCIETY

http://www.nanosmat.co.uk/society

the NANOSMAT society

The NANOSMAT Society (TNS) has been set up to serve the needs of the NANO community. TNS is designed to provide an effective and stimulating platform for international people to foster, develop and promote communication, education, networking, dissemination of knowledge, research and innovations in all aspects of nanoscience and nanotechnology.

The NANOSMAT Society aims to:

- Promote all aspects of nanoscience and nanotechnology
- Educate and bring awareness to people about nanotechnology and its impact on society and the world which we live in
- Raise, discuss and debate nano-related issues, including government policies on nanotechnology
- Facilitate liaisons and coalitions to help advance the Society's goals
- Offer society memberships to people
- Organise international NANO related conferences
- Provide an effective advertising platform for companies to promote their business
- Promote education and training through organising workshops, short educational courses, seminars, etc Bringing to the front, current and most recent up-to-date scientific and technical information to the public
- Alert people about new job opportunities relating to nanotechnology
- Publish magazines, reports and newsletters

Abstracts Booklet

3rd NANOSMAT-Asia Conference, 4-7 December 2017, Hong Kong (P.R.C)

Venue: City University of Hong Kong

CHAIRS:

Professor J Antonio Zapien (Chair), *City University of Hong Kong, Hong Kong*

Professor Sining Yun (Co-Chair), *Xi'an University of Architecture and Technology, China*

香港城市大學
City University of Hong Kong

NANO-43(2)

APPLICATION OF NANOCRYSTALLINE CALCIUM HYDROXYAPATITE IN 3D BIOPRINTING

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1 Al-Farabi Kazakh National University, Almaty, Kazakhstan
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In the present work, calcium hydroxyapatite was synthesized by various methods of chemical deposition using a biological source - the egg shell of birds, which is 94% calcium carbonate. The egg shell was heat treated at a temperature of 900°C., followed by the addition of an aqueous solution of orthophosphoric acid in an ultrasonic bath. Studies carried out by X-ray diffraction and scanning electron microscopy showed that the resulting powdered material was a micron-sized fine powder (4-5 μm).

NANO-43

OBTAINING GRAPHENE OXIDE FROM RICE HUSK

1,2 Seitzhanova M.A.*, 1,2Mansurov Z.A., 2Chenchik D.I., 1,2Azat S., 1,2Jandosov J.M., 2 Galin A.G.
1 Al-Farabi Kazakh National University, Almaty, Kazakhstan
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Graphene is an allotrope of carbon in the form of a two-dimensional, atomic-scale, hexagonal lattice in which one atom forms each vertex. It can be considered as an indefinitely large aromatic molecule, the ultimate case of the family of flat polycyclic aromatic hydrocarbons. In recent years graphene has become increasingly popular among engineers and researchers due to its unusual mechanical, thermal, electrical and optical properties.
Methods for its growth of graphene have been mainly catalytic chemical vapor deposition, heat-treatment of SiC, and the reduction of graphene-oxide. However, there still is room for methods that are more simple, cost-effective, and large scale. In this contribution, we have synthesed and characterized of graphene from agricultural waste such as rice husks. The graphene obtained from rice husk possesses a unique structure with clean edges, nanosize holes, and topological defects in the carbon lattice, which could trigger novel physicochemical properties. It is envisaged that graphene from rice husks opens the possibility of developing various applications due to its inexpensive, simple and scalable production. As an initial material, we used rice husks, which is a agricultural waste and KOH. In this work, KOH has been used as a typical chemical agent to induce porosity in carbon materials including carbon nanotubes, graphene, and carbon fibers, thus enhancing