



IUMRS-ICEM 2018

AUGUST 19(SUN.) - 24(FRI.), 2018 / DAEJEON, KOREA

Session Title	The 9th International Workshop for R & D Clustering Among Mexico and Korea in Ecomaterials Processing
Date and Time	2018-08-22 / 09:20 – 10:20
Place	Room 206 - 207
Session Chair	Do-Kyun Kwon (Korea Aerospace Univ., Korea)

Tu-K1-1

09:20 - 09:40

Strategies for Efficient Photoelectrochemical Water Oxidation using TiO₂ Nanorod Arrays: a Role of Surface Passivation, Doping of Non-metal and Sensitization of Earth-Abundant Nanocrystals

Kim Jin Hyeok
Hanyang Univ., Korea

Tu-K1-2

09:40 - 10:00

Nanotechnology to Overcome Material Challenges for Sustainable Energy System

U. Balachandran
Argonne Nat'l Laboratory, USA

Tu-K1-3

10:00 - 10:20

Waste Borosilicate Glass and Fly Ash used In the Fabrication of Alternative Cement Materials with Photocatalytic Activity for CO₂ Conversion to Fuels

Isaías Juárez Ramírez
UANL, Mexico



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Session Title	The 9th International Workshop for R & D Clustering Among Mexico and Korea in Ecomaterials Processing
Date and Time	2018-08-22 / 10:50 - 12:10
Place	Room 206 - 207
Session Chair	Kim Jin Hyeok (Hanyang Univ., Korea)

Tu-K2-1

10:50 - 11:10

The Innovation Enigma—Revisited

Elton Kauffman
Argonne Nat'l Laboratory, USA

Tu-K2-2

11:10 - 11:30

Scheelite-type ABO_4 films deposited by ink-jet printing and their application as photocatalyst in CO_2 reduction

U. Balachandran
Argonne Nat'l Laboratory, USA

Tu-K2-3

11:30 - 11:50

Stepwise Carbonates Formation from Seawater and Carbon Dioxide for Carbon Storage

Hyung Mi Lim
KICET, Korea

Tu-K2-4

11:50 - 12:10

Photocatalytic Hydrogen Production using CdS Nanofibers Modified with Graphene Oxide and NiO Nanoparticles

Oscar Quiroz Cardoso
UANL, Mexico



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Date and Time	2018-08-22 / 13:30 - 15:10
Place	Room 206 - 207
Session Chair	Isaías Juárez Ramírez (UANL, Mexico)

Tu-K3-1

13:30 - 13:50

Synthesis, Characterization, and Modeling of Complex Amorphous Semiconductors for Future Device Applications

Bob Chang
Northwestern Univ., USA

Tu-K3-2

13:50 - 14:10

Growth Evolution and Properties of Ga_2O_3 Films Prepared by Molecular-Beam Epitaxy for Power Semiconductor Devices

Soon-Ku Hong
Chungnam Nat'l Univ., Korea

Tu-K3-3

14:10 - 14:30

TiO_2 Nanorods Grown by Hydrothermal Method and Their Photocatalytic Activity for Hydrogen Production

Maria Rocio Alfaro Cruz
UANL, Mexico

Tu-K3-4

14:30 - 14:50

Fabrication of Sn Doped Blue and Black TiO_2 for NOX Removal

Adriana Martinez Oviedo
SMU, Korea

Tu-K3-5

14:50 - 15:10

Synthesis of AgMO_3 (M = Ta, Nb, V) Perovskites and Their Photocatalytic Activity for H_2 Evolution

Omar Ali Carrasco Jaim
UANL, Mexico



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Place	Room 206 - 207
Session Chair	Hyung Mi Lim (KICET, Korea)

Tu-K4-1

15:40 - 16:00

Current Status of Commission on Membership of the International Union of Materials Research Societies

John Baglin
IBM Almaden Research Center, USA

Tu-K4-2

16:00 - 16:20

Functional Dielectric Nanocomposites for Pulse Energy Storage

Do-Kyun Kwon
Korea Aerospace Univ., Korea

Tu-K4-3

16:20 - 16:40

Improving Photoelectrochemical Performance and Stability of Cu(In,Ga)Se₂ Photocathode with Reduced Graphene Oxide Interlayers

Byungha Shin
KAIST, Korea

Tu-K4-4

16:40 - 17:00

Polydopamine-like Film Coating using Atmospheric Plasma for Heavy Metal Absorption

Geun Young Yeom
Sung kyunkwan Univ., Korea

Tu-K4-5

17:00 - 17:20

Tailoring ABO₃-based Materials by an Addition of Nanostructured Carbon and Their Application in Photoreduction of CO₂

Mora-Hernandez J.Manuel
UANL, Mexico

Tu-K4-6

17:20 - 17:40

Sub-Wavelength Anti-Reflective Surface based on Nanoimprint Lithography and Its Applications to Conversion Efficiency Enhancement of PV Module

Heon Lee
Korea Univ., Korea

Tu-K4-7

17:40 - 18:00

Silicon Nitride ALD for Gate Spacer and Charge Trap Layer

Hyeongtag Jeon
Hanyang Univ., Korea