



# **7<sup>TH</sup> WORLD CONGRESS ON NEW TECHNOLOGIES (NEWTECH'21)**

**August 05 - 07, 2021 | Prague, Czech Republic | Virtual Conference**

**NewTech'21**

**August 06**

**August 07**

**Our program is based on EST (Eastern Standard Time - Time zone in Ottawa)**

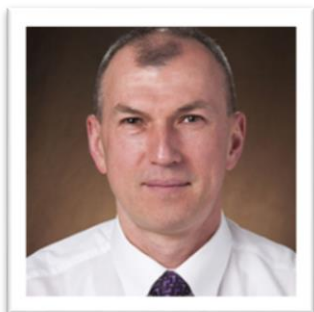
# NEWTECH'21

Thursday, August 05

10:00 AM – 12:00 PM

Registrations

## NewTech'21 Scientific Committee Chair

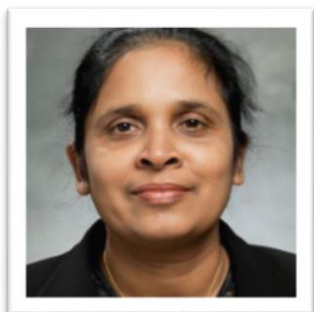


### **Dr. Andriy Voronov**

North Dakota State University, USA

Congress Chair

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### **Dr. Devika Chithrani**

University of Victoria, Canada

Congress Co-Chair

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### **Dr. Domenico Lombardo**

CNR - (Consiglio Nazionale delle Ricerche),  
Italy

Technical Program Chair

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# AUGUST 06

8:00 - 9:00	Registrations
9:00 AM - 9:10 AM	Official Opening
	Dr. Devika Chithrani, University of Victoria, Canada, Congress Co-Chair
9:10 AM - 9:55 AM	ICNFA KEYNOTE LECTURE
	<u>A Superficial Tale: Semiconductor Nanowires as a Remarkable Platform for Nanoelectronics and Sensing</u> Dr. Harry Ruda, University of Toronto, Canada
9:55 AM - 10:40 AM	ICEPR KEYNOTE LECTURE
	<u>Climate Change Mitigation in Cities: Challenges and Opportunities</u> Dr. Rajasekhar Bala, National University of Singapore, Singapore
10:40 AM - 10:45 AM	BREAK
10:45 AM - 11:35 AM	SESSION <u>NANOMEDICAL APPLICATIONS: DRUG DELIVERY, AND TISSUE ENGINEERING</u>
11:35 AM - 12:05 PM	SESSION <u>Soil Pollution and Treatment</u>
12:05 PM - 12:25 PM	Lunch Break

# AUGUST 06

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**12:25 PM - 01:10 PM**    **ICERT KEYNOTE LECTURE**

Improving Battery Performance via Mechanical Activation Enhanced Synthesis

Dr. Leon Shaw, Illinois Institute of Technology, USA

**1:10 PM - 01:55 PM**    **ICBB KEYNOTE LECTURE**

Development and Deployment of ‘Smart Diagnostics’: Next Generation Point of Care Sensors with Capacity to Learn

Dr. John McDevitt, New York University, USA

**1:55 PM - 2:00 PM**    **BREAK**

**2:00 PM - 3:45 PM**

**SESSION**

GREEN MANUFACTURING AND TECHNOLOGIES, POLLUTION PREVENTION

**3:45 PM - 4:00 PM**

**SESSION**

Nanobiotechnologies

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# ICNFA KEYNOTE LECTURE

AUGUST 06 | 9:10 AM - 9:55 AM | SESSION CHAIR: DR. DOMENICO LOMBARDO, CNR - (CONSIGLIO NAZIONALE DELLE RICERCHE), ITALY



**Title:** A Superficial Tale: Semiconductor Nanowires as a Remarkable Platform for Nanoelectronics and Sensing  
Dr. Harry Ruda, University of Toronto, Canada

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Harry Ruda obtained his Bachelors from Imperial College in 1979 and his PhD from MIT in 1982 for work on the optical and transport properties of II-VI based infrared detector materials. From 1982 to 1984 he worked as an IBM postdoctoral fellow on one of the first theories for electron transport in selectively doped 2d electron gas heterostructures. From 1984 to 1989 he was a senior scientist at 3M corporation leading their II-VI blue laser program and joined the University of Toronto in 1989 where he is currently a full professor and the Stanley Meek Chair in Nanotechnology and Director of the Centre for Nanotechnology. He has about 300 journal publications with about 8,200 citations and h-index of 43. He serves on the editorial boards of numerous journals and is a Fellow of the Royal Society of Canada, Fellow of Institute of Physics, Fellow of the Institute of Nanotechnology, Fellow of the Institution of Engineering and Technology, and Fellow of the Canadian Academy of Engineering.

# ICEPR KEYNOTE LECTURE

AUGUST 06 | 9:55 AM - 10:40 AM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA



**Title:** Climate Change Mitigation in Cities: Challenges and Opportunities  
Dr. Rajasekhar Bala, National University of Singapore, Singapore

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Rajasekhar Balasubramanian (Bala) is a Full Professor and Deputy Head in the Department of Civil and Environmental Engineering at the National University of Singapore. Prof Bala's research interests cut across environmental sustainability, climate change and urban air quality. The main goal of his interdisciplinary research is to advance understanding of environmental and health impacts of air pollution on scales ranging from local to global. His work provides policy-relevant scientific inputs and contributes to development of cost-effective technologies to mitigate adverse impacts of air pollution. He has led multi-national collaborative projects related to assessment and mitigation of personal exposure to airborne particles. He is currently spearheading an international research program that aims at improving air quality in cities through global alliance with premier universities. He is a one of the Lead Authors for the UN Environment Program's Global Environment Outlook, focusing on cross-cutting issues on environment and health. He is a member of the science panel of APCAP (Asia-Pacific Clean Air Partnership), appointed by UNEP (United Nations Environment Program). He is a recipient of many teaching and research awards, notably the PROSE (Professional and Scholarly Excellence) award in recognition of his contribution to the Global Environment Outlook (GEO-6) Report "Healthy Planet, Healthy People", edited by UN Environment and published by Cambridge University Press.

## SESSION

### NANOMEDICAL APPLICATIONS: DRUG DELIVERY, AND TISSUE ENGINEERING

AUGUST 06 | 10:45 AM - 11:35 AM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA & DR. JOHN MCDEVITT, NEW YORK UNIVERSITY, USA

**Title:** Spontaneous Emulsification Via Phase Inversion At Ambient Temperature For Stable N-Octane–Aerosol-OT/Water Microemulsions

**ICNFA 112**

**Time:** 10:45 AM - 10:50 AM

**Presenter:** Mikhail Proskurnin, Lomonosov Moscow State University, Russia

**Authors:** Kristina Simonova, Tatiana Samarina, Akihide Hibara, Mikhail Proskurnin

**Title:** Laser Assisted Deposition of Silver Nanoparticles into Dentinal Tubules

**ICNFA 113**

**Time:** 10:50 AM - 11:05 AM

**Presenter:** Pavel Polenik, Charles University Prague, Czech Republic

**Authors:** Pavel Polenik, Jan Reboun

**Title:** Gold Nanoparticle as a Model Nanoparticle System for Efficient Delivery of Anticancer Drugs

**ICNFA 301**

**Time:** 11:05 AM - 11:20 AM

**Presenter:** Ocean Han, University of Victoria, Canada

**Authors:** Ocean Han, Kyle Bromma, Devika B Chithrani

**Title:** Gold Nanoparticles Uptake in Monoculture vs Co-culture Pancreatic Cancer Cells

**ICNFA 302**

**Time:** 11:20 AM - 11:35 AM

**Presenter:** Abdulaziz Alhussan, University of Victoria, Canada

**Authors:** Abdulaziz Alhussan, Julian Smazynski, Devika Chithrani

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## SESSION

### SOIL POLLUTION AND TREATMENT

AUGUST 06 | 11:35 AM - 12:05 PM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA & DR. RAJASEKHAR BALA, NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE

**Title:** Chestnut Soils: A Comparison Study by Diffuse Reflectance and Attenuated Total Reflection FTIR spectroscopies with Fractionation

**ICEPR 114**

**Time:** 11:35 AM - 11:40 AM

**Presenter:** Mikhail A. Proskurnin, Lomonosov Moscow State University, Russia

**Authors:** FDmitry S. Volkov, Olga B. Rogova, Mikhail A. Proskurnin

**Title:** Temperature Dependences of IR Spectral Band Frequencies of Soils

**ICEPR 115**

**Time:** 11:40 AM - 11:45 AM

**Presenter:** Mikhail A. Proskurnin, Lomonosov Moscow State University, Russia

**Authors:** Dmitry S. Volkov, Olga B. Rogova, Mikhail A. Proskurnin

**Title:** Analysis and Effects of Microplastics in the Agricultural Soils

**ICEPR 119**

**Time:** 11:45 AM - 11:50 AM

**Presenter:** Doorgha Ragoobur, University of Mauritius, Mauritius

**Authors:** Authors: Doorgha Ragoobur, Geeta Somaroo

**Title:** Miscanthus X Giganteus and Trifolium Repens L. Co-Culture to Improve Quality of a Contaminated Technosol

**ICEPR 122**

**Time:** 11:50 AM - 12:05 PM

**Presenter:** Laura Wechtler, Université de Lorraine, France

**Authors:** Laura Wechtler, Jaïro Falla-Angel, Antoine Bonnefoy, Philippe Laval-Gilly

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# ICERT KEYNOTE LECTURE

AUGUST 06 | 12:25 PM - 01:10 PM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA



**Title:** Improving Battery Performance via Mechanical Activation Enhanced Synthesis  
Dr. Leon Shaw, Illinois Institute of Technology, USA

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Dr. Leon Shaw is the Rowe Family Endowed Chair Professor in Sustainable Energy and Professor of Materials Science and Engineering at Illinois Institute of Technology. His research interest is in novel materials synthesis and processing for energy storage. He was named as “Illinois Researchers to Know” in 2020 by Illinois Science and Technology Coalition and received an Energy Award in 2018 presented by International Association of Advanced Materials. He has authored more than 300 publications in materials synthesis and processing with 11,000+ citations. He is a Member of EU Academy of Sciences, a Fellow of ASM International, and a Fellow of International Association of Advanced Materials among others.

# ICBB KEYNOTE LECTURE

AUGUST 06 | 1:10 PM - 1:55 PM | SESSION CHAIR: DR. DOMENICO LOMBARDO, CNR - (CONSIGLIO NAZIONALE DELLE RICERCHE), ITALY



**Title:** Development and Deployment of ‘Smart Diagnostics’: Next Generation Point of Care Sensors with Capacity to Learn  
Dr. John McDevitt, New York University, USA

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John T. McDevitt now serves as a Full Professor within the Department of Biomaterials at New York University, is a member of NYU’s Bioengineering Institute and participates as a faculty member in the NYU Department of Chemical and Biomolecular Engineering within the Tandon School of Engineering. Prior to this time, he served for 5 years as the Brown-Weiss Professor of Bioengineering and Chemistry at Rice University and rose through the academic ranks at University of Texas at Austin where he was positioned for 20 years. McDevitt completed his Ph.D. degree in Chemistry from Stanford University.

Professor McDevitt is a pioneer in the development of ‘programmable bio-nano-chip’ technologies. He has a strong track record of translating essential bioscience, artificial intelligence and medical microdevice discoveries into real-world clinical practice. In this capacity, he has served as the Scientific Founder for a number of diagnostic and clinical services companies including OraLiva which features smart diagnostics for early disease detection as well as SensoDx which develops and monetizes programmable diagnostic hardware.

Form more information Please visit:

<https://bbseries.org/keynote-speakers/>

## SESSION

### GREEN MANUFACTURING AND TECHNOLOGIES, POLLUTION PREVENTION

AUGUST 06 | 02:00 PM - 03:45 PM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA & DR. RAJASEKHAR BALA, NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE

**Title:** Devulcanized Rubber a Solution for Scrap Tire

**ICEPR 113**

**Time:** 2:00 PM - 2:15 PM

**Presenter:** Abdalrahman Alsulaili, Kuwait University, Kuwait

**Authors:** Abdalrahman Alsulaili, Shoug Al Dabbous, Dalal Alsuwail, Rahaf Al Omar, Amina Al Helal, and , Muneera Hamadah

**Title:** Assessment of Catalytic Performance of Fe<sup>2+</sup>, Fe<sup>3+</sup> and Fe<sup>2+</sup>:Cu<sup>2+</sup> In Fenton and Photo-Fenton Treatment of Pulp Bleaching Wastewater

**ICEPR 117**

**Time:** 02:15 AM - 02:30 PM

**Presenter:** João Peres Ribeiro, University of Aveiro, Portugal

**Authors:** João Peres Ribeiro, Catarina Costa Marques, Maria Isabel Nunes

**Title:** Coupling of Fenton and Biological Processes for Pulp Bleaching Wastewater Treatment **ICEPR 118**

**Time:** 02:30 PM - 02:45 PM

**Presenter:** João Peres Ribeiro, University of Aveiro, Portugal

**Authors:** João Peres Ribeiro, Carolina Pedrosa Morim, Flávio Castro Silva, Maria Isabel Nunes

**Title:** Enhancing the Life Cycle Sustainability of Camelina Oil-Based Acrylic Monomer

**ICEPR 130**

**Time:** 02:45 PM - 03:00 PM

**Presenter:** Iryna Bon, North Dakota State University, USA

**Authors:** Authors: Iryna Bon, Na Wu, Zoriana Demchuk, Andriy Voronov, Ghasideh Pourhashem

**Title:** Concept for an International Fieldcourse in Sustainable Mining under Arctic Conditions

**ICEPR 116**

**Time:** 03:00 PM - 03:15 PM

**Presenter:** Esther Takaluoma, Kajaani University of Applied Sciences, Finland

**Authors:** Authors: Esther Takaluoma, Risto Oikari

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## SESSION

### GREEN MANUFACTURING AND TECHNOLOGIES, POLLUTION PREVENTION

AUGUST 06 | 02:00 PM - 03:45 PM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA & DR. RAJASEKHAR BALA, NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE

**Title:** Adsorption-Desorption of Critical Metals from Simulated Acid Mine Drainage by Metakaolin Geopolymer

**ICEPR 123**

**Time:** 03:15 PM - 03:30 PM

**Presenter:** Esther Takaluoma, Kajaani University of Applied Sciences, Finland

**Authors:** Esther Takaluoma, Tatiana Samarina

**Title:** UV-Grafted Polydimethylsiloxane Membranes For Effective Removal of Tramadol

**ICEPR 127**

**Time:** 03:30 PM - 03:45 PM

**Presenter:** Mariia Pasichnyk, Institute of Chemical Process Fundamentals of the Czech Academy of Sciences, Prague, Czech

**Authors:** Mariia Pasichnyk, Swati Sundararajan, Roni Kasher, Jana Gaalova

# SESSION

## NANOBIOTECHNOLOGIES

AUGUST 06 | 3:45 PM - 4:00 PM | SESSION CHAIR: DR. DOMENICO LOMBARDO, CNR - (CONSIGLIO NAZIONALE DELLE RICERCHE), ITALY

**Title:** Experimental Investigation into Quasi-Static Crushing of CFRP Composite Cylindrical Tubes after Thermal Aging

**ICNFA 11**

**Time:** 03:45 PM - 03:50 PM

**Presenter:** Said Kaba, Institute of General pathology and Pathophysiology, Russia

**Authors:** Said Kaba, Alice Sokolovskaya, Elena Egorova

**Title:** Design, Manufacturing and Testing of Pipe Fittings

**ICNFA 115**

**Time:** 03:50 PM - 03:55 PM

**Presenter:** Marcela Cândido, Universidade de Vale do Paraíba/Instituto de Pesquisa e Desenvolvimento, Brasil

**Authors:** Ingrid Silva, Thaís Veriato, Rafaela Silva, Marcela Cândido, Leandro Raniero, Maiara Castilho

**Title:** Evaluation of the use of titanium and silicon nanoparticles for the improvement the thermal conditioning system in vehicles

**ICNFA 114**

**Time:** 03:55 PM - 04:00 PM

**Presenter:** Marcela Cândido, Universidade de Vale do Paraíba/Instituto de Pesquisa e Desenvolvimento, Brasil

**Authors:** Marcela Cândido, Nathanne Rost, Andrea Campos, Maiara Castilho, Leandro Raniero

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# AUGUST 07

**9:00 AM - 9:45 AM ICEPR KEYNOTE LECTURE**

Recycling Urine for Hydrogen Production in a Microbial Electrolysis Cell (MEC) System Using a Novel Mos2 Nano Carbon Coated Electrode  
Dr. Woo Hyoung Lee, University of Central Florida, USA

**9:45 AM - 10:30 AM ICERT KEYNOTE LECTURE**

Progress in Advanced Photovoltaic Thermal Collectors  
Dr. Kamaruzzaman Sopian, National University of Malaysia, Malaysia

**10:30 AM - 10:35 AM BREAK**

**10:35 AM - 12:20 PM SESSION**  
ENVIRONMENTAL POLLUTIONS AND PROTECTIONS

**12:20 PM - 12:40 PM LUNCH BREAK**

**12:40 PM - 01:25 PM ICNFA KEYNOTE LECTURE**

Hydrogen Production via Electrocatalysis: From Nanoclusters to Single Atoms  
Dr. Lifeng Liu, Iberian Nanotechnology Laboratory, Portugal

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# AUGUST 07

1:25 PM - 2:10 PM

ICNFA KEYNOTE LECTURE

Nano and Microscale Light-based 3D  
Bioprinting for Tissue Engineering and  
Regenerative Medicine

Dr. Shaochen Chen, University of California,  
USA

2:10 PM - 2:15 PM

BREAK

2:15 PM - 3:20 PM

SESSION

ENERGY CONVERSION AND MANAGEMENT

3:20 PM - 3:55 PM

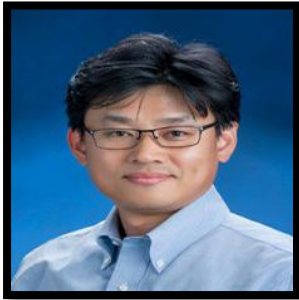
SESSION

BIOTECHNOLOGY

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# ICEPR KEYNOTE LECTURE

AUGUST 07 | 9:00 AM - 9:45 AM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA



**Title:** Recycling Urine for Hydrogen Production in a Microbial Electrolysis Cell (MEC) System Using a Novel Mos2 Nano Carbon Coated Electrode

[Dr. Woo Hyoung Lee, University of Central Florida, USA](#)

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Dr. Woo Hyoung Lee, P.E. is an associate professor in the Department of Civil, Environmental, and Construction Engineering at the University of Central Florida (UCF). He received his Ph.D. in environmental engineering from the University of Cincinnati in 2009. His primary research area is to develop electrochemical microsensors for in situ investigation of physical and chemical dynamics in microenvironments such as biofilm, corrosion, and emulsions by combining with nano and biotechnology. His other research interest is to develop renewable (bio)energy processes for environmental sustainability. He is currently a registered professional engineer.



# ICERT KEYNOTE LECTURE

AUGUST 07 | 9:45 AM - 10:30 AM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA



**Title:** Progress in Advanced Photovoltaic Thermal Collectors

Dr. Kamaruzzaman Sopian, National University of Malaysia, Malaysia

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Prof. Dr. Kamaruzzaman Sopian obtained his BSc in Mechanical Engineering from the University of Wisconsin-Madison in 1985, MSc in Energy Resources from the University of Pittsburgh in 1989 and PhD. in Mechanical Engineering from the Dorgan Solar Laboratory, University of Miami in 1997. He is presently the Professor in Renewable Energy and Director of the Solar Energy Research Institute, Universiti Kebangsaan Malaysia (National University of Malaysia). He has been involved in the field of renewable energy for more than 30 years. His main contributions are in advanced solar photovoltaic systems (grid-connected photovoltaic, solar powered regenerative fuel cell, solar hydrogen production, thin film silicon solar cell), advanced solar thermal systems (solar cooling, solar heat pump, solar assisted drying, combined photovoltaic thermal or hybrid collector) and life cycle assessment and optimization of micro-power systems. He has also developed other renewable energy technology such as low speed wind turbine and pico-hydro system. He is listed in the 2020 Highly Cited Researchers by the Web of Science Group, Clarivate Analytics.

## SESSION

### ENVIRONMENTAL POLLUTIONS AND PROTECTIONS

AUGUST 07 | 10:35 AM- 12:20 PM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA & DR. WOO HYOUNG LEE, UNIVERSITY OF CENTRAL FLORIDA, USA

**Title:** Biological effects on *C. elegans* in the application of essential oils as natural fungicides

**ICEPR 129**

**Time:** 10:35 AM - 10:50 AM

**Presenter:** Miriam Zanellato, Inail, Italy

**Authors:** Miriam Zanellato, Priscilla Boccia, Maria Grazia Berardinelli

**Title:** A Good Practice Project Related To Sustainable Solutions to Address the Global Pandemic and Achieve Agenda 2030

**ICEPR 128**

**Time:** 10:50 AM - 11:05 AM

**Presenter:** Elena Sturchio, Italian Workers' Compensation Authority (INAIL), Italy

**Authors:** Elena Sturchio, Miriam Zanellato, Priscilla Boccia

**Title:** Catalytic Complete Oxidation Of Benzene Over Pd Catalysts: Support Effect

**ICEPR 108**

**Time:** 11:05 AM - 11:20 AM

**Presenter:** Tatyana Tabakova, Institute of Catalysis, Bulgarian Academy of Sciences, Bulgaria.

**Authors:** Tatyana Tabakova, Petya Petrova, Yordanka Karakirova, Anna Maria Venezia, Leonarda Francesca Liotta, Lyuba Ilieva

**Title:** Renewable Eco-Friendly Activated Biochar from Tobacco: Chlorpyrifos Removal Studies

**ICEPR 111**

**Time:** 11:20 AM - 11:35 AM

**Presenter:** Elio Conradi Junior, Universidade Estadual do Oeste do Paraná - UNIOESTE, Brazil

**Authors:** Elio Conradi Junior, Affonso Celso Gonçalves Junior, Juliano Zimmermann, Daniel Schwantes, Carlos Daniel Zenni, Guilherme Lindner Ziemer, Vinicius Henrique Dias de Oliveira, Felipe Dudczak

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## SESSION

### ENVIRONMENTAL POLLUTIONS AND PROTECTIONS

AUGUST 07 | 10:35 AM- 12:20 PM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA & DR. WOO HYOUNG LEE, UNIVERSITY OF CENTRAL FLORIDA, USA

**Title:** COD Removal from Mixed Dye Wastewater Using Natural Pyrite Ore by Heterogeneous Fenton Process

**ICEPR 110**

**Time:** 11:35 AM - 11:50 AM

**Presenter:** Dilara Ozturk, Van Yuzuncu Yil University, Turkey

**Authors:** Dilara Ozturk

**Title:** Challenges in Environmental Impact Assessment (EIA) In Land-scarce Singapore

**ICEPR 301**

**Time:** 11:50 AM - 12:05 PM

**Presenter:** Charles CC Lee, Newcastle Australia Institute of Higher Education, Singapore

**Authors:** Charles CC Lee, Rios Anita

**Title:** Waste Water Treatment with Biomicrogel

**ICEPR 302**

**Time:** 12:05 PM - 12:20 PM

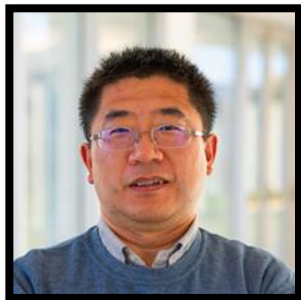
**Presenter:** Maxim Mironov, SPC Biomocrogel company Ltd, Russian Federation

**Authors:** Maxim Mironov, Andrey Kryazhov, Vladimir Kuimov, Alexander Yagupov, Andrey Elagin

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# ICNFA KEYNOTE LECTURE

AUGUST 07 | 12:40 PM - 01:25 PM | SESSION CHAIR: DR. DOMENICO LOMBARDO, CNR - (CONSIGLIO NAZIONALE DELLE RICERCHE), ITALY



**Title:** Hydrogen Production via Electrocatalysis: From Nanoclusters to Single Atoms

Dr. Lifeng Liu, Iberian Nanotechnology Laboratory, Portugal

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Lifeng Liu (Researcher ID: A-2522-2012, Orcid ID: 0000-0003-2732-7399) received his Bachelor degree in Applied Physics from Beijing Jiaotong University (2001), and both his Master (2004) and PhD (2007) degrees in Condensed Matter Physics from the Institute of Physics, Chinese Academy of Sciences. He joined Max Planck Institute of Microstructure Physics (MPI-Halle) in 2007, first working as a postdoctoral researcher and then as a staff scientist, under the supervision of the late Prof. Ulrich Goesele. He started his independent research career in 2008 and became a Group Leader in 2009 at MPI-Halle. In 2011, he moved to the International Iberian Nanotechnology Laboratory (INL) and set up a research group there, where his research now focuses on the development of new materials for use in electrochemical energy conversion and storage devices including electrolyzers, rechargeable batteries, supercapacitors, and photoelectrochemical cells. Lifeng Liu has been actively working on nanomaterials and nanostructures since 2002, and has published 160+ scientific papers in international peer-reviewed journals by far. He received several awards and honors such as the FCT Investigator Grant 2014, Young Researcher Prize of the Portuguese Electrochemical Society 2015, and the Emerging Investigator 2019 by the RSC journal "Chemical Communications". He is now the Editorial Board Members of Advances in Nano Research and Materials Today Energy.

# ICNFA KEYNOTE LECTURE

AUGUST 07 | 01:25 PM - 02:10 PM | SESSION CHAIR: DR. DOMENICO LOMBARDO, CNR - (CONSIGLIO NAZIONALE DELLE RICERCHE), ITALY



**Title:** Nano and Microscale Light-based 3D Bioprinting for Tissue Engineering and Regenerative Medicine  
Dr. Shaochen Chen, University of California, USA

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Dr. Shaochen Chen is a Professor and Chair in the NanoEngineering Department and Professor in the Bioengineering Department at the University of California, San Diego (UCSD). He is the founding co-director of the Biomaterials and Tissue Engineering Center at UCSD. Before joining UCSD, Dr. Chen had been a Professor and a Henderson Centennial Endowed Faculty Fellow in Engineering at the University of Texas at Austin from 2001 to 2010. Between 2008 and 2010, he served as the Program Director for the Nanomanufacturing Program of the US National Science Foundation (NSF).

For more information please visit:

<https://icnfa.com/keynote-speakers/>

# SESSION

## ENERGY CONVERSION AND MANAGEMENT

AUGUST 07 | 2:15 PM - 03:20 PM | SESSION CHAIR: DR. DOMENICO LOMBARDO, CNR - (CONSIGLIO NAZIONALE DELLE RICERCHE), ITALY & DR. WOO HYOUNG LEE, UNIVERSITY OF CENTRAL FLORIDA, USA

**Title:** Small Green Energy: Implementation through Gamification of the Educational Process

**ICERT 117**

**Time:** 02:15 PM - 02:30 PM

**Presenter:** Seidaliyeva A.B., Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeev , Kazakhstan

**Authors:** Seidaliyeva A.B., Niyazova G.B., Kopishev E.E., Vitulyova E.S., Kabdushev S.B., Baipakbayeva S.T., Bakirov A.S., Suleimenov I.E.

**Title:** Passive Façade Retrofit in War-Affected Dwellings in Syria

**ICERT 105**

**Time:** 2:30 PM - 2:35 PM

**Presenter:** Walaa Haj Ali , Manchester School of Architecture, Uk

**Authors:** Walaa Haj Ali, Ola Uduku

**Title:** Electric Travelling Planner as a support for promoting of environmental friendly mobility - remarks based on international research project

**ICERT 301**

**Time:** 2:35 PM - 2:50 PM

**Presenter:** Grzegorz Sierpiński, Silesian University of Technology, Poland

**Authors:** Grzegorz Sierpiński

**Title:** Comparison of Activities for the Wider Implementation and Development of Electromobility in Iran and Poland

**ICERT 302**

**Time:** 2:50 PM - 3:05 PM

**Presenter:** Grzegorz Sierpiński, Silesian University of Technology, Poland

**Authors:** Siamak Ahmadian, Grzegorz Sierpiński

**Title:** The Impact of Utilizing Shared Electric Vehicles on The Energy, Environmental pollution and Transportation

**ICERT 303**

**Time:** 2:05 PM - 3:20 PM

**Presenter:** Siamak Ahmadian, Iran Construction Engineering Organization, Iran

**Authors:** Siamak Ahmadian, Grzegorz Sierpiński

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# SESSION

## BIOTECHNOLOGY

AUGUST 07 | 3:20 PM - 03:55 PM | SESSION CHAIR: DR. DEVIKA CHITHRANI, UNIVERSITY OF VICTORIA, CANADA

**Title:** Shear and Stress in the Walls of a Paediatric Ventricular Assist Device  
**ICBB 105**

**Time:** 3:20 PM - 3:35 PM

**Presenter:** Bernardo Luiz Harry Diniz Lemos, 1Escola Politécnica da Universidade de São Paulo (EP USP), Brazil

**Authors:** Vítor Augusto Andreghetto Bortolin, Bernardo Luiz Harry Diniz Lemos, Rodrigo de Lima Amaral, Marcelo Mazzeto, Idágene Aparecida Cestari, Júlio Romano Maneghini

**Title:** Experimental Investigation of VSS in Virtual Red Blood Cells and Platelets in the Flow of a PVAD Using Pseudo-Tracking Analysis

**ICBB 106**

**Time:** 3:35 PM - 3:50 PM

**Presenter:** Bernardo Luiz Harry Diniz Lemos, 1Escola Politécnica da Universidade de São Paulo (EP USP), Brazil

**Authors:** Bernardo Luiz Harry Diniz Lemos, Vítor Augusto Andreghetto Bortolin, Rodrigo de Lima Amaral, Marcelo Mazzeto, Idágene Aparecida Cestari, Júlio Romano Maneghini

**Title:** Stability of a Fermented Milk Enriched With Microbial CLA/CLNA  
**ICBB 231**

**Time:** 3:50 PM - 3:55 PM

**Presenter:** Ana L. Fontes, Universidade Católica Portuguesa & Universidade de Aveiro, Portugal

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