

Organized by
UNITED Scientific Group
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GEM-2026
March 09-11, 2026 | Boston, MA

10th Edition of
GLOBAL ENERGY MEET

March 9-11, 2026 | Boston, MA (Hybrid)



Four Points by Sheraton Wakefield Boston
Hotel & Conference Center



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Join Zoom Live Stream

<https://us05web.zoom.us/j/84724338388?pwd=IAd6pyhtxlnML7fbvylIznRo8Mza8H1>

Meeting ID: 847 2433 8388

Passcode: 711483

08:00–08:50 Registrations & Badge Pickup

08:50–09:00 Opening Ceremony

Plenary Talks (35+5 Minutes)

Session Chair: **Elise Strobach**, *AeroShield Materials, Inc., Waltham, MA*



09:00–09:40

Chris Mi

Founder and CTO, Novos Power Inc., Distinguished Professor, Electrical and Computer Engineering, San Diego State University, San Diego, CA

Cost-Effective and Energy-Efficient Megawatt Medium-Voltage Power Conversion for AI Data Centers and EV Fast Charging Stations



09:40–10:20

Wang Liqiu

Otto Poon Charitable Foundation Endowed Professor in Smart & Sustainable Energy, & Chair Professor of Thermal-Fluid & Energy Engineering, Hong Kong Polytechnic University, Hong Kong

Heat Transfer with Thermal Waves and Resonance

Keynote Talks (35+5 Minutes)

Session Chair: **Wang Liqiu**, *Hong Kong Polytechnic University, Hong Kong*



10:20–11:00

Elise Strobach

Founder & CEO, AeroShield Materials, Inc., Waltham, MA

Enabling Energy Efficiency: From Advanced Materials Invention to Scalable Building Solutions

11:00–11:30

Coffee Break

@ Ballroom Foyer & Wakefield Foyer



11:30–12:10

Neil Auerbach

Founder and CEO, Hudson Sustainable Group, Miami, FL

Harnessing Distributed Energy Resources to Address the AI Power Supply Gap



12:10–12:50

Thomas J. Webster

Professor, Hebei University of Technology, China

Nanomaterials: Improved Energy for Implantable Sensors

12:50–13:50

Group Photo & Networking Lunch

@ Restaurant



13:50–14:30

Wolfgang Bauer

University Distinguished Professor, Department of Physics and Astronomy, Michigan State University, East Lansing, MI

Cost and Benefit of Replacing All Fossil Fuel Power Generation

Oral presentations (20+5 minutes)

Session I: Energy & Climate Change / Sustainable Energy

Session Chair: Wolfgang Bauer, Michigan State University, East Lansing, MI

- 14:30-14:55 **Advancing the Assessment of Climate Polarisation Using Joint Shannon Entropy of Temperature and Precipitation Fields**
Bernard Twarog, Cracow University of Technology, Poland
- 14:55-15:20 **Hydrophilic Microporous Matrix Hosting a Symbiotic Microbial Consortium for Crop Resilience Enhancement**
Teresa M. Victor, ISPTEC, Angola
- 15:20-15:45 **Thermo-Mechanical Stress Analysis of Wellbore Integrity in CO₂ Storage Wells: A Case Study from the Tubaen Formation, Snohvit Field, Norway**
Jawad Ali Khan, PetroND Energy Solutions, Grand Forks, ND

Session II: Hydrogen & Fuel Cells / Wind Power & Energy / Smart Grids

Session Chair: Wolfgang Bauer, Michigan State University, East Lansing, MI

- 15:45-16:10 **Comparing Wind-Hydrogen and Solar-Hydrogen System Performance and Cost for Reliable Microgrid Operation**
Jack Cimorelli, University of Massachusetts Lowell, Lowell, MA
- 16:10-16:35 **Co-optimization of Cost and Curtailment in Hybrid Wind-Hydrogen Powered Microgrids: Understanding the Impact of Overbuilding**
Victor Eniola, University of Massachusetts Lowell, Lowell, MA
- 16:35-16:50 **Exhibitor Talk: Find Your Superposition in Finland**
Alex Romanovich, Work in Finland, Finland

WORK IN
FINLAND

16:50 **Coffee & Networking Reception** @ Ballroom Foyer & Wakefield Foyer

End of Day 1

Join Zoom Live Stream

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Keynote Talks (35+5 Minutes)

Session Chair: Teresa M. Victor, *ISPTEC, Angola*



09:00–09:40

Shule Yu

Materials Engineer, Envision Energy,
Burlington, MA

Reinventing Electrolysis with Nanostructured Electrode Architectures for Scalable, Low-Cost Hydrogen



09:40–10:20

Wolfgang Bauer

University Distinguished Professor,
Department of Physics and Astronomy,
Michigan State University, East Lansing, MI

New Nuclear Reactors to Combat Global Warming

Oral Presentations (20+5 minutes)

Session III: Smart Grids / Energy Conversion & Storage

Session Chair: Olumide Ogunmodimu, *Pennsylvania State University, University Park, PA*

10:20–10:45

Quantitative Assessment of Vibration-Induced Drill String Wear Failure in Ultra-Deep Oil Wells

Liming Dai, *University of Regina, Canada*

10:45–11:15

Coffee Break

@ Ballroom Foyer & Wakefield Foyer

11:15–11:40

Voltage Profile Enhancement in Critical Feeders Using Feedback Controlled Dynamic Voltage Restorers

Manuel Dario Jaramillo Monge, *Salesian Polytechnic University, Ecuador*

11:40–12:05

Production of Zeolite Y From Kaolin Conversion for Energy Applications

Teresa M. Victor, *ISPTEC, Angola*

12:05–12:30

Green hydrogen Production from Alternative Water Resources and Waste Plastic Feedstocks

Huiyao Wang, *New Mexico State University, Las Cruces, NM*

12:30–13:30

Networking Lunch

@ Restaurant

Session IV: Energy Materials / Sustainable Energy / Energy Efficiency

Session Chair: Teresa M. Victor, *ISPTEC, Angola*

13:30–13:55

Predictive Model for Energy Efficiency in Peru Using Data Mining to Reduce CO₂ Emissions

Reynaldo Jose Cervantes Bravo, *National Agrarian University, Peru*

13:55–14:20

Improving the Fatigue Design of Mechanical Systems such as Refrigerator

Seongwoo Woo, *Ethiopian Technical University, Ethiopia*

14:20-14:45 **Circular Valorization of Metallurgical Slags for Thermal Energy Storage in Concentrated Solar Power Systems and Sustainable Mining Operations**
Olumide Ogunmodimu, *Pennsylvania State University, University Park, PA*

14:45-15:10 **Comparative Characterization of Different Metallurgical Slags for Thermal Energy Storage for Concentrated Solar Power**
Michael Emeka Enemu, *Pennsylvania State University, University Park, PA*



15:10-15:50 **(Plenary Virtual)**

Yogi Goswami

Distinguished Professor and Director, Clean Energy Research Center, University of South Florida, Tampa, FL

Role of Innovation in the Global Quest to Achieve Net Zero Carbon Emissions

Coffee & End of Day 2

@ Ballroom Foyer & Wakefield Foyer

Join Zoom Live Stream

<https://us05web.zoom.us/j/84724338388?pwd=IAd6pyhtxlnML7fbvylZnRo8Mza8H.1>

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07:50–08:00 Opening Remarks & Introduction

Keynote Talks (35+5 Minutes)

Session Chair: Pooja Sharma, *University of Delhi, India*



08:00–08:40

Donglu Shi

Professor, University of Cincinnati, OH

Photon Recycling via Harvesting Indoor Lights for Energy Generation via Photovoltaic and Photothermal Thin Films



08:40–9:20

Oomman K. Varghese

Associate Professor, Department of Physics, University of Houston, TX

Exposing the Novel Properties of Nanoscale Energy Materials via in-situ Studies and Optical Simulations

Oral Presentations (20+5 Minutes)

Session Chair: Oomman K. Varghese, *University of Houston, TX*

9:20–9:45

Technical Practices and Upgrading Paths of New-Generation Coal Fired Power for Low-Carbon and Efficient Development

Chen Xinyue, *Shanghai Shenergy Power Technology Co., LTD., Shanghai, China*

9:45–10:10

Role of Energy Efficiency in Energy Transition: A Decomposition Analysis of Energy Use

Pooja Sharma, *University of Delhi, India*

10:10–10:35

Benchmarking Passenger Vehicle Technologies with an Eco-Efficiency Index

Ilker Turgut Yilmaz, *Marmara University, Turkey*

10:35–10:55

Break

Session Chair: Pooja Sharma, *University of Delhi, India*

10:55–11:20

Production of Ancillary Services with Solar Thermal Energy for Industrial Applications

Guillermo Martinez-Rodriguez, *University of Guanajuato, Mexico*

11:20–11:45

Use of Pressure Transient Analysis to Evaluate Fluid Soaking in Multi-Fractured Shale Gas Wells

Majid Hussain, *Prince Mohammad Bin Fahd University (PMU), Lafayette, LA*

11:45–12:10

Photovoltaic-Thermal Integrated with Shea Butter as Phase Change Material to Enhance Electrical Efficiency and Hot Water Production in Sub-Saharan Africa: Nigeria as Case Study

Kar Richard Awai, *Cranfield University, United Kingdom*

12:10–12:35

The Use of Solar Energy in Rainwater Harvesting Systems for Climate-Resilient Agriculture in Sub-Saharan Africa

Eugene Rurangwa, *UNFAO, Rwanda*

- 12:35- 13:00 **Factors Enabling Access to Affordable, Reliable, Sustainable and Modern Energy in the European Union**
Aldona Migala-Warchol, *Rzeszow University of Technology, Poland*
- 13:00- 13:25 **Optimization of Compressor Station Operations in Natural Gas Transmission Systems Using Machine Learning and Genetic Algorithms**
Javie Alexander Ruiz, *Promigas S.A E.S.P., Colombia*
- 13:25- 13:50 **Breakthrough Zero-CO₂ Distributed Power Source**
Randell Mills, *Brilliant Light Power, Inc., Cranbury, NJ*

Closing Remarks & End of Day 3

We Wish To See You at

GEM-2027

Feb 17-19, 2027 | Houston, TX



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