



## 5th Energy Colloquium of the Munich School of Engineering **Innovations for Energy Systems, Mobility, Buildings and Materials**

09.07.2015 – 8.30 am to 9.00 pm

**8.30 - 9.00 am**  
**Registration**

**9.00 - 9.15 am**  
**Opening**  
Klaus Diepold, Senior Vice President TUM  
Thomas Hamacher, Director Munich School of Engineering

**9.15 - 9.45 am**  
**Keynote: The Energiewende as a Business Case**  
Clemens Hoffmann, Director Fraunhofer Institute for Wind Energy and Energy System Technology (IWES)

**9.45 - 11.00 am**  
**Session Chair: Markus Lienkamp, WZE MSE**

**Energy Storage System Management and Design Space Exploration of Public Electric Vehicle Charging Stations**  
Sangyoung Park, Institute for Real-Time Computer Systems

**From Model Surfaces to Nanostructured Catalysts for Oxygen Electroreduction in Fuel Cells**  
Viktor Colic, Physics of Energy Conversion and Storage

**Visio.M - Light Vehicle Concept for Urban Electric Mobility**  
Patrick Stenner, Institute of Automotive Technology

**11.00 - 11.45 am**  
**Poster Presentation, Coffee Break**

**11.45 - 1.00 pm**  
**Session Chair: Werner Lang, ZNB MSE**

**Design-Engineering-Based and Material-Based Improvement of Precast Concrete Facade Elements**  
Matthias Pätzold, Chair of Building Construction and Material Science

**Non-Residential Buildings - Modelling the Long-Term Development of Energy Demand**  
Laura Franke, Center for Sustainable Building

**The CityGML Energy ADE - An International Standardization Effort for the Extension of 3D City Models to Support Energetic Building Analysis**  
Robert Kaden, Chair of Geoinformatics

**1.00 - 2.30 pm**  
**Poster Presentation, Lunch Break**

**2.30 - 2.50 pm**  
**Teaching at MSE**  
Nikolaus A. Adams, Dean for Academic Affairs MSE

**2.50 - 4.05 pm**  
**Session Chair: Peter Müller-Buschbaum, NRG MSE**

**Optimization of Carbon Nanotubes Networks for Organic Photovoltaics by Femtosecond Laser Structuring**  
Jürgen Sotrop, Institute for Nanoelectronics in cooperation with University of Applied Sciences Munich

**Metal Cluster Semiconductor Hybrid Materials in Photocatalysis for Chemical Energy Conversion**  
Constantin Walenta, Chair of Physical Chemistry

**Hybrid Thermoelectrics Based on a Polymer-Nanoparticle Composite**  
Nitin Saxena, Chair of Functional Materials

**4.05 - 4.50 pm**  
**Poster Presentation, Coffee Break**

**4.50 - 6.05 pm**  
**Session Chair: Hartmut Spliethoff, CPG MSE**

**Heat Transfer at Supercritical Pressures in Power Applications - Physics and Experimental Methods**  
Gerrit Schatte, Institute for Energy Systems

**Optimal Planning of Urban Infrastructure Networks for Multiple Energy Carriers**  
Johannes Dorfner, Institute for Renewable and Sustainable Energy Systems

**Small-Scale Wind Turbine Systems with Efficient and Inexpensive Generator Topology for Micro-Grids**  
Christoph Hackl, Research Group MSE

**6.05 - 6.35 pm**  
**Keynote: Building and Energy Research in Singapore**  
Priya Pawar, Energy Research Institute, Nanyang Technological University, Singapore

**6.35 - 6.50 pm**  
**Summary of the Day**

**6.50 - 9.00 pm**  
**Poster and Presentation Award, Colloquium Dinner**

**Location:**  
**TUM – Institute for Advanced Study, Garching**

**Registration:**  
**<http://www.mse.tum.de>**