

*The 25th International Conference on*  
**Semiconductor Photocatalysis and Solar**  
**Energy Conversion**  
**(SPASEC-25)**

*The 26th International Conference on*  
**Advanced Oxidation Technologies for**  
**Treatment of Water, Air and Soil**  
**(AOTs-26)**

**FINAL PROGRAM**

**The SPASEC-25 & AOTs-26 will be jointly held under the Auspices of  
Leibniz Institute of Catalysis, The University of Rostock, Germany  
August 29 – September 1, 2022**

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**Professor Dan Meyerstein**, Ariel University and Professor Emeritus Chemistry Department, Ben-Gurion University, Israel  
**Dr. Michael Nolan**, Tyndall National Institute, UCC, Cork, Ireland / NIBEC, Ulster University, UK  
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**Professor Christian Schöneich (Conference Chair – AOTs-26)**, Department of Pharmaceutical Chemistry, The University of Kansas, Simons Laboratories, USA  
**Professor Adriana Zaleska-Medynska**, University of Gdańsk, Poland

<b>Monday, August 29, 2022</b>	
8:00 – 9:00am	<b>Onsite Registration</b>
8:45 – 9:00am	<b>Introductory Remarks</b>
<b>Session 1: Photocatalysis Fundamentals</b>	
9:00 – 9:40am PL	<p><b>Design, preparation and characterization of functional Solid materials based on energy-resolved distribution of electron traps</b>  <b>Bunsho Ohtani</b>  Hokkaido University and Nonprofitable Organization touche NPO, Sapporo, Japan</p>
9:40 – 10:05am IL	<p><b>Single-site photocatalysts: Understanding the interplay between structure, charge carrier dynamics and photocatalytic performance</b>  <b>Moritz Lang<sup>1</sup>, Christoph Merschjann<sup>2</sup>, Julian Klein<sup>3</sup>, Marcus Klahn<sup>1</sup>, Gerd Bacher<sup>3</sup>, Thomas Schedel-Niedrig<sup>2</sup>, <u>Jennifer Strunk<sup>1</sup></u></b>  <sup>1</sup>Leibniz Institute for Catalysis at the University of Rostock, Rostock, Germany  <sup>2</sup>Institute of Methods for Material Development, Helmholtz-Zentrum Berlin, Berlin, Germany  <sup>3</sup>Werkstoffe der Elektrotechnik, Universität Duisburg-Essen, Duisburg, Germany</p>
10:05 – 10:25am ST	<p><b>The role of alcoholic sacrificial agents in photocatalysis: Is it always trivial?</b>  <b>Krishnamoorthy Sathiyani<sup>1</sup>, Ronen Bar-Ziv<sup>2</sup>, and <u>Tomer Zidki<sup>1</sup></u></b>  <sup>1</sup>Department of Chemical Sciences, the Centers for Radical Reactions and Material Research, Ariel University, Ariel, Israel  <sup>2</sup>Department of Chemistry, Nuclear Research Center Negev, Beer-Sheva, Israel</p>
10:25 – 11:00am	<b>Coffee Break</b>
<b>Session 2: Photocatalysis for Degradation of Various Pollutants I</b>	

11:00 – 11:25am IL	<b>Strategies to overcome efficiency loss of photocatalytic reactions at high light intensity using kinetic analysis and optimized reactor concepts</b> <b>Jonathan Z. Bloh</b> DECHEMA-Forschungsinstitut, Frankfurt am Main, Germany
11:25 – 11:50am IL	<b>The effect of peroxydisulfate ion on the heterogeneous photocatalysis</b> <b>Tünde Alapi, Máté Náfrádi, Bence Veres, Dorottya Dudás, Luca Farkas</b> Department of Inorganic and Analytical Chemistry, University of Szeged, Szeged, Hungary
11:50 – 12:15pm IL	<b>Photocatalytic treatment of polluted air and water in CPC based pilot reactor: similarities and challenges</b> <b>I. Grčić*, L. Radetić, K. Miklec, M. Tomaš, P. Benjak, B. Radetić, K. Leskovar, D. Težak and M. Božičević</b> University of Zagreb, Faculty of Geotechnical Engineering, Department of Environmental Engineering
12:15 – 12:35pm ST	<b>Visible light activation of persulfate and H<sub>2</sub>O<sub>2</sub> by TiO<sub>2</sub>/Fe<sub>2</sub>O<sub>3</sub> composites for degradation of amoxicillin: Degradation Mechanism, transformation pathways and toxicity assessment</b> <b>Francis M. dela Rosa<sup>1,2,3*</sup>, Marin Popović<sup>4</sup>, Josipa Papac<sup>1</sup>, Gabrijele Radić<sup>1</sup>, Marijana Kraljić Roković<sup>1</sup>, Marin Kovačić<sup>1</sup>, María José Farré<sup>2,3</sup>, Urška Lavrenčič Štangar<sup>5</sup>, Hrvoje Kušić<sup>1*</sup>, Ana Lončarić Božić<sup>1</sup>, Mira Petrović<sup>2,6</sup></b> <sup>1</sup> Faculty of Chemical Engineering and Technology, University of Zagreb, Zagreb, Croatia <sup>2</sup> Catalan Institute for Water Research (ICRA), Girona, Spain <sup>3</sup> University of Girona Girona, Spain <sup>4</sup> Karlovac University of Applied Sciences, Karlovac, Croatia <sup>5</sup> Faculty of Chemistry and Chemical Technology, University of Ljubljana, Ljubljana, Slovenia <sup>6</sup> Catalan Institut on for Research and Advanced Studies (ICREA), Barcelona, Spain
12:35 – 2:00 pm	<b>Lunch Break</b>

<b>Session 3: Photocatalysis for Degradation of Various Pollutants II</b>	
2:00 – 2:25pm IL	<p><b>Z-scheme heterojunctions and their application in the photocatalytic treatment of contaminants of emerging concern</b></p> <p><b>Dionysios (Dion) D. Dionysiou</b> University of Cincinnati, Cincinnati, Ohio, USA</p>
2:25 – 2:50pm IL	<p><b>Heterogeneous photocatalysis with wire free UV-A LEDs</b></p> <p><b>L. C. Ferreira<sup>1,2</sup>, José R. Fernandes<sup>1</sup>, J. A. Peres<sup>1</sup>, P. B. Tavares<sup>1</sup>, <u>M. S. Lucas</u><sup>1*</sup></b></p> <p><sup>1</sup>Centro de Química de Vila Real (CQVR), Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal <sup>2</sup>Associação Fraunhofer Portugal Research – AWAM, Regia Douro Park, Andrães, Vila Real, Portugal</p>
2:50 – 3:15pm IL	<p><b>An assessment of photo- and electrocatalytic degradation of organic contaminants in saline water</b></p> <p><b>Robert Bruninghoff, Bastian Mei, Annemarie Huijser, <u>Guido Mul</u></b> University of Twente, The Netherlands</p>
3:15 – 3:45pm	<b>Coffee Break</b>
3:45 – 4:05pm ST	<p><b>Combination of microalgae and photocatalysis with immobilized TiO<sub>2</sub>/UV-A LEDs for winery wastewater treatment</b></p> <p><b>L. Marchão, J. R. Fernandes, J. A. Peres, P. B. Tavares, <u>M. S. Lucas</u>*</b></p> <p>Centro de Química de Vila Real (CQVR), Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal</p>
<b>Session 4: Oxidation Technologies I</b>	
4:05 – 4:45pm PL	<p><b>What we know about the simultaneous use of ultrasound and TiO<sub>2</sub> photocatalysis to purify water</b></p> <p><b>Pierre Pichat</b> “Photocatalyse et Environnement”, CNRS/Ecole Centrale Lyon (STMS), Ecully CEDEX, France</p>

4:45 – 5:10pm IL	<p><b>Advanced oxidation processes as factor the stability of peptide and protein therapeutics in formulations</b>  <b>Christian Schöneich</b>  Department of Pharmaceutical Chemistry, University of Kansas  Lawrence, USA</p>
5:10 – 5:35pm IL	<p><b>What are the oxidizing intermediates in the Fenton and Fenton-like reactions?</b>  <b>Dan Meyerstein</b>  Chemical Sciences Dept., The Radical Research Center and the Schlesinger Family Center for Compact Accelerators, Radiation Sources and Applications, Ariel University, Ariel, Israel, and Chemistry Dept., Ben-Gurion University, Beer-Sheva, Israel</p>
5:35 – 6:35pm	<p><b>Panel Discussion: Challenges facing the Commercialization of Photocatalysis</b>  <b>Panelists:</b>  <b>Professor Adriana Zaleska- Medyanska</b>, University of Gdansk, Poland  <b>Dr. Jan Prochazka</b>, Advanced Materials-JTJ., Czech Republic  <b>Dr. Silvia Suárez</b>, FOTOAIR-Ciemat, Renewable Energy Division, Madrid, Spain</p>
<p><b>Tuesday, August 30, 2022</b></p>	
<p><b>Session 5: Oxidation Technologies II</b></p>	
9:00 – 9:25am IL	<p><b>Problems and opportunities in the development of selective oxidation reactions: catalytic dehydrogenations as an attractive alternative to classic oxidations</b>  <b>Matthias Beller</b>  Leibniz-Institut für Katalyse an der Universität Rostock, Rostock, Germany</p>
9:25 – 9:50am IL	<p><b>Rational design of carbon-based materials towards of electrocatalytic dechlorination of 1,2-dichloroethane VOCs</b>  <b>Xinyong Li</b>  Dalian University of Technology, Dalian, China</p>

9:50 – 10:15am IL	<p><b>The degradation studies and toxicity reduction of microcystins (MC-LR and MC-RR) by double frequency ultrasonic reactor</b></p> <p><b><u>Zeynep Eren</u>, Fatmagül Özdemir</b> 1Ataturk University, Engineering Faculty, Environmental Engineering Department, Erzurum Turkey</p>
10:15 – 10:35am ST	<p><b>Investigation of the UV/S<sub>2</sub>O<sub>8</sub><sup>2-</sup> and UV/VUV/S<sub>2</sub>O<sub>8</sub><sup>2-</sup> processes for the elimination of trimethoprim antibiotic - the effect of reaction parameters and matrix components</b></p> <p><b><u>Luca Farkas</u>, Adrienn Szirmai, Tünde Alapi</b> Department of Inorganic and Analytical Chemistry, University of Szeged, H-6720 Szeged, Dóm square 7, Hungary</p>
10:35 – 11:05am	<b>Coffee Break</b>
<b>Session 6: Oxidation Technologies III</b>	
11:05 – 11:30am IL	<p><b>PMOC destruction after adsorptive enrichment – novel concepts for degradation of challenging contaminants using zeolites</b></p> <p><b><u>Anett Georgi</u>, Lin Qian, Katrin Mackenzie</b> Helmholtz Centre for Environmental Research – UFZ, Department of Environmental Engineering, Leipzig, Germany</p>
11:30 – 11:55pm IL	<p><b>Mn–Mn coupling in photoluminescence kinetics of doped ZnS nanoplatelets</b></p> <p><b>Christian Klinke</b> University of Rostock, Germany</p>
11:55 – 12:20pm IL	<p><b>The change of the biochemical property of microorganism under the photo-disinfection process</b></p> <p><b>Jing-Hua Tzeng<sup>1,2</sup>, Chih-Huang Weng<sup>3</sup>, Chun-Chieh Wang<sup>4</sup>, Mon-Shu Ho<sup>5</sup>, Li-Ting Yen<sup>1,6</sup>, Gulomjon Gaybullaev<sup>1</sup>, Chakkrit Poonpakdee<sup>7</sup>, <u>Yao-Tung Lin</u><sup>1,8,*</sup></b></p> <p><sup>1</sup>Department of Soil and Environmental Sciences, National Chung Hsing University, Taichung, Taiwan  <sup>2</sup>Department of Civil and Environmental Engineering, University of Delaware, Newark, DE, USA  <sup>3</sup>Department of Civil and Ecological Engineering, I-Shou University, Kaohsiung City, Taiwan  <sup>4</sup>National Synchrotron Radiation Research Center, Hsinchu, Taiwan</p>

	<p><sup>5</sup>Department of Physics, National Chung Hsing University, Taichung, Taiwan</p> <p><sup>6</sup>Department of Plants, Soils and Climate, Utah State University, Logan, UT, USA</p> <p><sup>7</sup>Department of Earth Science, Faculty of Natural Resources, Prince of Songkla University, Songkhla</p> <p><sup>8</sup>Innovation and Development Center of Sustainable Agriculture, Taichung, Taiwan</p>
12:20 – 12:45pm IL	<p><b>Are small diketones greener agents for water pollution control?</b></p> <p><b>Shujuan Zhang</b> State Key Laboratory of Pollution Control and Resource Reuse School of the Environment, Nanjing University, P.R. China</p>
12:45– 2:00pm	<b>Lunch Break</b>
<b>Session 7: Photocatalysis Synthesis I</b>	
2:00 – 2:25pm IL	<p><b>TiO<sub>2</sub>/ SiO<sub>2</sub>/REO composites for photocatalytic removal of low-soluble persistent organic compounds from water</b></p> <p><b>Šárka Paušová, Jana Pechačová, Jakub Rusek, Josef Krýsa</b> Department of Inorganic Technology, University of Chemistry and Technology Prague, Czech Republic</p>
2:25 – 2:50pm IL	<p><b>Titania modified with copper for photocatalytic activity enhancement</b></p> <p><b>Kunlei Wang,<sup>1</sup> Marcin Janczarek,<sup>2</sup> Zuzanna Bielan,<sup>1,3</sup> Zhishun Wei,<sup>1,4</sup> Maya Endo-Kimura,<sup>1</sup> Agata Markowska-Szczupak,<sup>5</sup> Bunsho Ohtani<sup>1</sup> and Ewa Kowalska<sup>1</sup></b></p> <p><sup>1</sup>Institute for Catalysis, Hokkaido University, Sapporo, Japan  <sup>2</sup>Poznan University of Technology, Poznan, Poland  <sup>3</sup>Gdansk University of Technology, Gdansk, Poland  <sup>4</sup>Hubei University of Technology, Wuhan, China  <sup>5</sup>West Pomeranian University of Technology, Szczecin, Poland</p>
2:50 – 3:10pm ST	<p><b>Enhancement photocatalytic ability of mesoporous ZnO and TiO<sub>2</sub> thin films with the accommodation of silver nanoparticles for antibacterial activity</b></p> <p><b>L. Al-Hajji, Adel A. Ismail, IS Azad, A. Al-Yaqoot, M. Alseidi, Sh. Ahmed</b></p>



	Nanotechnology and Advanced Materials Program, Energy & Building Research Center, Kuwait Institute for Scientific Research (KISR), Safat, Kuwait.
3:10 – 3:40pm	<b>Coffee Break</b>
3:40 – 4:05pm IL	<p><b>Fabrication of a metal-free 2D-2D Nb<sub>2</sub>CT<sub>x</sub>@g-C<sub>3</sub>N<sub>4</sub> MXene-based Schottky-heterojunction with the potential application in photocatalytic processes</b></p> <p><b>Lekgowa C Makola,<sup>1,2</sup> Sharon Moeno,<sup>3</sup> Cecil N. M. Ouma,<sup>4</sup> Langelihle N. Dlamini<sup>1,2*</sup></b></p> <p><sup>1</sup>Department of Chemical Sciences, University of Johannesburg, Doornfontein Campus, Johannesburg, South Africa.  <sup>2</sup>Centre for Nanomaterials Science Research, University of Johannesburg, South Africa.  <sup>3</sup>Department of Oral Biological Sciences, Faculty of Health Sciences, University of The Witwatersrand, Johannesburg, South Africa.  <sup>4</sup>HySA Infrastructure Centre of Competence, Northwest University, Faculty of Engineering, South Africa</p>
4:05 – 4:25pm ST	<p><b>Dynamics of semiconductor-supported co-catalytic nanoparticles in photocatalytic applications</b></p> <p><b><u>Guido Mul</u>, Kai Han, Bastian Mei</b> University of Twente, The Netherlands</p>
<b>Posters</b>	
4:30 – 5:30pm	<p><b>The effect of inorganic ions on the H<sub>2</sub>O<sub>2</sub> formation and trimethoprim degradation during UV/VUV (185/254 nm) and VUV (172 nm) irradiation</b></p> <p><b>Luca Farkas, <u>Tünde Alapi</u></b> Department of Inorganic and Analytical Chemistry, University of Szeged, Szeged, Hungary</p>
4:30 – 5:30pm	<p><b>Synthesis, characterization, and application of TiO<sub>2</sub>-SnS<sub>2</sub>/GO-RGO-based material for photocatalytic H<sub>2</sub> production under Solar light irradiation</b></p> <p><b>Perović Klara, Josipa Papac, Hrvoje Kušić, Marin Kovačić, Ana Lončarić Božić, Marijana Kraljić Roković</b> Faculty of Chemical Engineering and Technology, University of Zagreb, Zagreb, Croatia</p>

4:30 – 5:30pm	<p><b>Effects of photodeposited cocatalyst on bismuth vanadate surface as an activator of hydrogen peroxide in photocatalytic degradation of ciprofloxacin</b></p> <p><b><u>Marin Popović</u></b>,<sup>1*</sup> Tayebah Sharifi,<sup>2,3</sup> Marin Kovačić,<sup>2</sup> Marijana Kraljić Roković,<sup>2</sup> Igor Peternel,<sup>1</sup> Hrvoje Kušić,<sup>2</sup> Urška Lavrenčič Štangar,<sup>4</sup> Ana Lončarić Božić<sup>2</sup></p> <p><sup>1</sup>Karlovac University of Applied Sciences, Karlovac, Croatia  <sup>2</sup>Faculty of Chemical Engineering and Technology, University of Zagreb, Zagreb, Croatia,  <sup>3</sup>Ruđer Bošković Institute, Division of Materials Physics, Laboratory for Energy Conversion Materials and Sensors, Zagreb, Croatia  <sup>4</sup>Faculty of Chemistry and Chemical Technology, University of Ljubljana, Ljubljana, Slovenia</p>
4:30 – 5:30pm	<p><b>Modelling and experimental validation of the photocatalytic CO<sub>2</sub> reduction in a TiO<sub>2</sub> slurry</b></p> <p><b><u>M.M. Ballari</u></b><sup>1</sup>, <b>M. Filip Edelmannová</b><sup>2</sup>, <b>R. Ricka</b><sup>2</sup>, <b>M. Reli</b><sup>2</sup>, <b>K. Kočí</b><sup>2</sup></p> <p><sup>1</sup>Instituto de Desarrollo Tecnológico para la Industria Química, INTEC (Universidad Nacional del Litoral and CONICET), Santa Fe, Argentina  <sup>2</sup>Institute of Environmental Technology, CEET, VŠB-Technical University of Ostrava, Ostrava-Poruba, Czech Republic</p>
4:30 – 5:30pm	<p><b>Photocatalytic hydrogen evolution from glycerol-water mixture over ZnIn<sub>2</sub>S<sub>4</sub> obtained on Bi-based semiconductor as a template</b></p> <p><b><u>Onur Cavdar</u></b><sup>1</sup>, <b>Mateusz Baluk</b><sup>1</sup>, <b>Anna Malankowska</b><sup>1</sup>, <b>Andrzej Żak</b><sup>2</sup>, <b>Wojciech Lisowski</b><sup>3</sup>, <b>Tomasz Klimczuk</b><sup>4,5</sup>, <b>Adriana Zaleska-Medynska</b><sup>1</sup></p> <p><sup>1</sup> Department of Environmental Technology, Faculty of Chemistry, University of Gdansk, Gdansk, Poland  <sup>2</sup> Electron Microscopy Laboratory, Faculty of Mechanical Engineering, Wrocław University of Science and Technology, Gdansk, Poland  <sup>3</sup> Institute of Physical Chemistry, Polish Academy of Science, Warsaw, Poland  <sup>4</sup> Faculty of Applied Physics and Mathematics, Gdansk University of Technology, Narutowicza, Gdansk, Poland  <sup>5</sup> Advanced Materials Center, Gdansk University of Technology, Narutowicza, Gdansk, Poland</p>

**Wednesday, August 31, 2022**

**Session 8: Photocatalysis Synthesis II**

9:00 – 9:20am ST	<b>Plasmonic metal nanoparticles/ mesoporous titanium dioxide composite for photocatalytic reduction reactions</b> <b><u>Heinrich Vocke</u>, Marvin Abraham, Felix Fornfeist, Dereje Hailu Taffa, Michael Wark</b> Carl-von-Ossietzky Universität Oldenburg, Germany
9:20 – 9:40am ST	<b>The effects of fluorination on titanium dioxide towards the photocatalytic degradation of toluene</b> <b><u>Yingguang Zhang</u>, Dennis Y.C. Leung</b> Department of Mechanical Engineering, The University of Hong Kong, Pokfulam Road, Hong Kong
9:40 – 10:00am ST	<b>Magnesium and aluminum doped TiO<sub>2</sub> nanoparticles as adsorbents and photocatalysts for destruction of toxic chemicals, CO<sub>2</sub> reduction and H<sub>2</sub> evolution</b> <b><u>Alexander V. Vorontsov</u><sup>1</sup>, and Panagiotis G. Smirniotis<sup>2</sup></b> <sup>1</sup> Technion – Israel Institute of Technology, Haifa, Israel; Novosibirsk State University, Novosibirsk, Russia <sup>2</sup> University of Cincinnati, Cincinnati, OH, USA

**Session 9: Photocatalysis Synthesis III**

10:00 – 10:25am IL	<b>Highly active strontium titanate formed by microwave-assisted solvothermal route for photocatalytic hydrogen evolution and carbon dioxide reduction</b> <b><u>Michael Wark</u>, Josefine Hundt, Marco Weers</b> Institute of Chemistry, Chemical Technology 1, Carl-von-Ossietzky Universität Oldenburg, Oldenburg, Germany
10:25 – 11:00am	<b>Coffee Break</b>
11:00 – 11:25am IL	<b>Metal-organic frameworks (MOFs)-based photocatalysts</b> <b>P. Parnicka<sup>1</sup>, J. Sowik<sup>1</sup>, A. Malankowska<sup>1</sup>, A. Pancielejko<sup>1</sup>, H. Głowienke<sup>1</sup>, M. Baluk<sup>1</sup>, T. Klimczuk<sup>2</sup>, G. Trykowski<sup>3</sup>, W. Lisowski<sup>4</sup> and <u>A. Zaleska-Medynska</u><sup>1</sup></b>

	<p><sup>1</sup>Department of Environmental Technology, Faculty of Chemistry, University of Gdansk, Gdansk, Poland</p> <p><sup>2</sup>Department of Solid-State Physics, Faculty of Applied Physics and Mathematics, Gdansk University of Technology, Gdansk, Poland</p> <p><sup>3</sup>Faculty of Chemistry, Nicolaus Copernicus University, Torun, Poland</p> <p><sup>4</sup>Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland</p>
11:25 – 11:45am ST	<p><b>Photocatalytic degradation of ibuprofen assisted with Sm<sup>+3</sup>-doped TiO<sub>2</sub></b>  <b>G. De Ávila-Montiel, J. Colina-Marquez*</b>, R. Insignares-Ledesma  Chemical Engineering Department, Universidad de Cartagena, Cartagena, Colombia</p>
<p><b>Session 10: Photocatalysis for Air Remediation</b></p>	
11:45 – 12:10pm IL	<p><b>Photocatalysis for air decontamination: current status and future challenges</b>  <u>S. Suárez</u>, M.P. Alcacera, M. J. Mateos, A. Lao-Zea, B. Sánchez  FOTOAIR-Ciemat, Renewable Energy Division, Madrid, Spain</p>
12:10 – 12:35pm IL	<p><b>Photocatalytic elimination of nitrogen oxides (NO<sub>x</sub>), ozone and organic emissions from the polluted air of the city of Prague</b>  <b>Jan Prochazka</b>  Advanced Materials-JTJ., Czech Republic</p>
12:35 – 2:00pm	<p><b>Lunch Break</b></p>
2:00 – 2:20pm ST	<p><b>Pros and cons of photocatalytic building materials applied to air remediation</b>  <b>Federico Salvadores, Silvia Mercedes Zacarías, Orlando M. Alfano, María de los Milagros Ballari</b>  Instituto de Desarrollo Tecnológico para la Industria Química, INTEC (Universidad Nacional del Litoral and CONICET), Ruta Nacional N° 168, 3000 Santa Fe, Argentina</p>
2:20 – 2:40pm ST	<p><b>NO<sub>x</sub> gases photooxidation assisted with Sm<sup>+3</sup>-doped titania</b>  <b>X. Sierra-Gonzalez<sup>1</sup>, J. Colina-Márquez<sup>1,*</sup>, A. Martínez de la Cruz<sup>2</sup></b>  <sup>1</sup> Chemical Engineering Department, Universidad de Cartagena, Cartagena de Indias, Colombia  <sup>2</sup> Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León, México</p>

2:40 – 3:00pm ST	<b>Evaluation of self-cleaning properties of photocatalytic materials by in situ contact angle measurements</b> <u>M. J. Mateos</u> , M. P. Alcacera, A. Lao-Zea, B. Sánchez, S. Suárez FOTOAIR-Ciemat, Renewable Energy Division, Madrid, Spain
3:00 – 7:30pm	<b>Free Time</b>
7:30 – 9:30pm	<b>Banquet Dinner</b>
<b>Thursday, Sept 1, 2022</b>	
<b>Session 11: Photocatalysis for H<sub>2</sub> Production/CO<sub>2</sub> Reduction I</b>	
9:00 – 9:40am PL	<b>Simulation-driven design of modified TiO<sub>2</sub> for Hydrogen Production and CO<sub>2</sub> Reduction</b> <b>Michael Nolan</b> Tyndall National Institute, University College Cork, Ireland
9:40 – 10:05am	<b>Solar hydrogen generation from water and waste</b> <b>Moritz F. Kühnel</b> Department of Chemistry, Swansea University, Singleton Park, Swansea, SA2 8PP, UK and Fraunhofer Institute for Wind Energy Systems (IWES), Am Haupttor, Leuna, Germany
10:05 – 10:25am ST	<b>Surfactant-mediated and stirring-assisted structural evolution of ZnIn<sub>2</sub>S<sub>4</sub> nanosheets with enhanced photocatalytic hydrogen evolution</b> <u>Shuoping Ding</u> , Igor Medic, Norbert Steinfeldt, Jennifer Strunk* Leibniz-Institut für Katalyse e. V. (LIKAT), Albert-Einstein-Str. 29a, 18059 Rostock, Germany
10:25 – 11:00am	<b>Coffee Break</b>
11:00 – 11:25am IL	<b>Boosting Photocatalytic CO<sub>2</sub> Reduction: Challenges and Potential</b> <u>Minoo Tasbihi</u> , Reinhard Schomäcker Department of Chemistry, Technical University of Berlin, Berlin, Germany
11:25 – 11:45am IL	<b>Evaluation of a novel black sand geocatalyst with magnetic properties for photocatalytic hydrogen production</b>

	<p><b>A. López-Vásquez<sup>1</sup>, <u>J. Colina-Márquez</u>*<sup>2</sup>, F. Machuca-Martínez<sup>3</sup></b>  <sup>1</sup>Chemical Engineering Department, Universidad Nacional de Colombia, Manizales, Caldas, Colombia  <sup>2</sup> Chemical Engineering Department, Universidad de Cartagena, Cartagena, Colombia  <sup>3</sup> Chemical Engineering School, Universidad del Valle, Cali, Colombia</p>
11:45am – 1:00pm	<b>Adjourn &amp; Lunch</b>