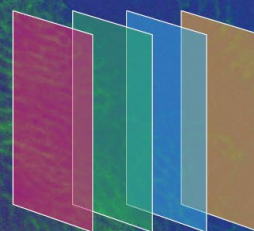


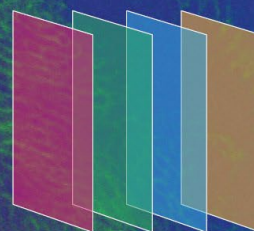
POSTER SESSION

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- 001 **Comparison of the Activity of 3D Nickel-Manganese/Titanium Bifunctional Electrocatalysts for Alkaline Seawater and Simulated Seawater Splitting**
Barua, Sukomol¹; Balčiūnaitė, Aldona¹; Vaičiūnienė, Jūratė¹; Tamašauskaitė-Tamašiūnaitė, Loreta¹; Norkus, Eugenijus¹; ¹Department of Catalysis, Center for Physical Sciences and Technology (FTMC), Vilnius/Lithuania
-
- 002 **Nickel catalysts for hydrogen generation**
Valeckytė, Gitana; Sukackienė, Zita; Kepenienė, Virginija; Stalnionienė, Irena; Jasulaitienė, Vitalija; Vaičiūnienė, Jūratė; Tamašauskaitė Tamašiūnaitė, Loreta; Stalnionis, Giedrius; Norkus, Eugenijus
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- 003 **Study of Oxygen Reduction Reaction on alpha-Manganese Dioxide in a GDE Half-Cell**
Rampf, Alexander¹; Zeis, Roswitha²; ¹Karlsruhe Institute of Technology, Helmholtz Institute, Ulm/Germany, ²Friedrich-Alexander-University Erlangen-Nürnberg (FAU), Erlangen-Nürnberg/Germany
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- 004 **Electrocatalysis meets biocatalysis: microbial electrolysis cell**
Ilic, Ivan¹; Lang, Maren¹; Erben, Johannes¹; Patel, Nitant¹; Rodrigo, Jose¹; ¹Electrochaea Planegg/Germany
-
- 005 **Bringing GDE half-cell and MEA single cell testing closer together**
Baumunk, Adrian¹; Kircher, Mario²; Etzold, Bastian JM¹; ¹Friedrich-Alexander-Universität Erlangen-Nürnberg, Fürth/Germany; ²Technische Universität Graz, Graz/Austria
-
- 006 **The Effect of Electrocatalyst on Microfluidic Electrochemical Sensor**
Ghanbari, Mohammad Hossein¹; Etzold, Bastian J.M¹; ¹FAU Erlangen-Nürnberg, Erlangen/Germany
-
- 007 **3D-printed carbon electrodes for water electrolysis**
Olvianas, Muhammad¹; Majeed, Abdul¹; Gläsel, Jan¹; Etzold, Bastian¹; ¹FAU Erlangen-Nürnberg, Fürth/Germany
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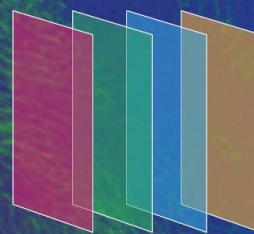
POSTER SESSION

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- 008 **Implementation of an in situ atomic force microscope (AFM) setup to study the dynamics of (electro)catalytic interfaces**
Reindl, Simone¹; Hilpert, Felix¹; Brummel, Olaf¹; Retzer, Tanja¹; Libuda, Jörg¹;
¹Interface Research and Catalysis, Erlangen Center for Interface Research and Catalysis, FAU Erlangen-Nürnberg, Erlangen/Germany
-
- 009 **Approaching Macroscopic Measurements in Microscopic Environments – A new Electrochemical Cell Design**
Merkens, Stefan¹; Bejtka, Katarzyna²; Fontana, Marco²; Gho, Cecilia²; De Salvo, Giuseppe¹; Pirri, Candido Fabrizio²; Chiodoni, Angelica²; Grzelczak, Marek³; Chuvilin, Andrey¹; ¹CIC nanoGUNE BRTA, Donostia-San Sebastian/Spain; ²Center for Sustainable Future Technologies@Polito, Istituto Italiano di Tecnologia, Torino/Italy; ³Donostia International Physics Center (DIPC)
-
- 010 **Guidelines for correct product quantification in CO₂ electrolysis**
Daniel Rottmann^{1,2}; Ricarda Kloth¹; Stefan Haufe¹; Karl Mayrhofer²; ¹Wacker Chemie AG, Munich/Germany; ²Department of Chemical and Biological Engineering, Friedrich-Alexander University Erlangen-Nürnberg, Erlangen/Germany
-
- 011 **Chemical and Structural In-Situ Characterization of Model Electrocatalysts by Combined Infrared Spectroscopy and Surface X-Ray Diffraction**
Brummel, Olaf¹; Jacobse, Leon²; Simanenko, Alexander¹; Deng, Xin¹; Geile, Simon²; Gutowski, Olof²; Vonk, Vedran²; Lykhach, Yaroslava¹; Stierle, Andreas²; Libuda, Jörg¹;
¹Friedrich-Alexander-Universität Erlangen-Nürnberg/Germany, ²Centre for X-ray and Nano Science CXNS, Deutsches Elektronen-Synchrotron DESY, Hamburg/Germany
-
- 012 **Evaluation of NiFeOOH Catalysts in Varied Electrode Geometries under Industrially Realistic Conditions for Enhanced Alkaline Water Electrolysis**
Hoffmann, Julia¹; Schmitt, Nicolai²; Goerens, Christian³; Etzold, Bastian¹; ¹Friedrich-Alexander-Universität Erlangen-Nürnberg/Germany, Power-to-X Technologies, Fürth/Germany, ²TU Darmstadt, Ernst-Berl-Institut für Technische und Makromolekulare Chemie, Darmstadt/Germany, ³Umicore AG & Co KG, Hanau-Wolfgang/Germany
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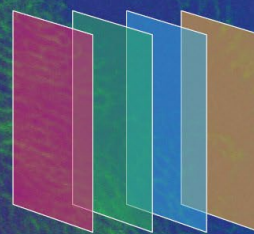
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- 013 **Isopropanol electro-oxidation on well-defined model Pt-Ru alloys: structure, activity, and composition**
Simanenko, Alexander¹; Kastenmeier, Maximilian¹; Winkler, Florian¹; Skála, Tomáš²; Tsud, Nataliya²; Mehl, Sascha³; Brummel, Olaf¹; Lykhach, Yaroslava¹; Libuda, Jörg¹; ¹Interface Research and Catalysis, Erlangen Center for Interface Research and Catalysis, Friedrich-Alexander-University Erlangen-Nürnberg, ²Department of Surface and Plasma Science, Charles University, Prague/Czech Republic, ³Elettra - Sincrotrone Trieste S.C.p.A., Basovizza-Trieste/Italy
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- 014 **The Effects of Support Material on the Structural Evolution of Copper during Electrochemical CO₂ Reduction**
Koh, Ezra S.¹; Geiger, Simon²; Gunnarson, Alexander³; Imhof, Timo¹; Meyer, Gregor⁴; Paciok, Paul⁵; Etzold, Bastian⁴; Rose, Marcus⁴; Schüth, Ferdi³; Ledendecker, Marc¹; ¹Technical University of Munich, Straubing, Germany, ²Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart/Germany, ³Max Planck-Institut für Kohlenforschung, Mülheim an der Ruhr/Germany, ⁴Technical University of Darmstadt/Germany, ⁵Forschungszentrum Juelich/Germany
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- 015 **Nanostructural Insights into Sb-doped CoO_x Model Catalysts for Acidic Water Oxidation**
Chalil Oglou, Ramadan; Interdisciplinary Nanoscience Center, Aarhus University, Aarhus/Denmark
-
- 016 **Investigation of the Gas Permeation Stream through GDEs for CO₂ Electrolysis and Possible Links to Selectivity**
Römer, Melina¹; Röblitz, Joshua¹; Näser, Nils²; Etzold, Bastian²; ¹TU Darmstadt, Darmstadt/Germany, ²Friedrich-Alexander-Universität Erlangen-Nürnberg, Fürth/Germany
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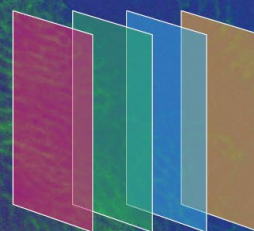
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- 017 **Scalable Synthesis of IrOx@TiO2 Core-Shell Catalyst for Proton-Exchange Membrane Water Electrolysis**
Hoffmeister, Darius¹; Finger, Selina¹; Fiedler, Lena¹; Ma, Tien-Ching¹; Körner, Andreas¹; Zlatar, Matej¹; Fritsch, Birk¹; Witte-Bodnar, Kerstin²; Carl, Simon³; Götz, Alexander³; Apeleo Zubiri, Benjamin³; Spiecker, Erdmann³; Cherevko, Serhiy¹; Freiberg, Anna T.S.¹; Mayrhofer, Karl J.J.¹; Thiele, Simon¹; Hutzler, Andreas¹; van Pham, Chuyen¹;
¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ²Materials Diagnostics for H2 Technologies, Fraunhofer Institute for Microstructure of Materials and Systems IMWS, Halle/Germany, ³Institute of Micro- and Nanostructure Research (IMN) and Center for Nanoanalysis and Electron Microscopy (CENEM), Interdisciplinary Center for Nanostructured Films (IZNF), Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany
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- 018 **Pitfall on interpretation of double layer capacitance increase after accelerated stress test of NiMo hydrogen evolution catalysts**
Majeed, Abdul¹; ¹Friedrich-Alexander-Universität Erlangen-Nürnberg/Germany
-
- 019 **Elucidating electronic characteristics of transition metal perovskites as descriptors for (electro)chemical reactions**
Mürtz, Sonja¹; Simböck, Johannes¹; Zeng, Feng²; Ghiasi, Mahnaz³; Schönebaum, Simon⁴; Simon, Ulrich⁴; de Groot, Frank M. F.³; Palkovits, Regina¹; ¹Chair of Heterogeneous Catalysis and Chemical Technology, RWTH Aachen, Aachen/Germany, ²Nanjing Tech University, ³Debye Institute for Nanomaterials Science, Utrecht University, ⁴Institute of Inorganic Chemistry, RWTH Aachen
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- 020 **How the ionic liquid [C2C1Im][OTf] affects the stability of Pt(111) during potential cycling**
Hilpert, Felix¹; Yunsheng, Qiu²; Lahn, Leopold²; Höllring, Kevin¹; Briega-Martos, Valentin²; Cherevko, Serhiy²; Kasian, Olga²; Smith, Ana-Sunčana¹; Mayrhofer, Karl²; Brummel, Olaf¹; Libuda, Jörg¹; ¹Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany, ²Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Erlangen/Germany
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- 021 **Nanostructural effect on the mass transport of mesoporous hydrogel electrodes for oxygen evolution reaction**
Wago, Hiroki¹; Mitsushima, Shigenori¹; Kuroda, Yoshiyuki¹; ¹Department of Chemistry Applications and Life Science, Graduate School of Engineering Science, Yokohama National University, Tokiwadai, Hodogaya-ku, Yokohama Kanagawa/Japan
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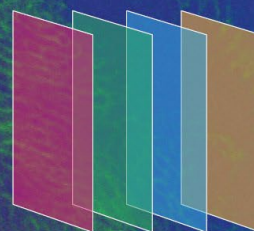
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- 022 **Dissolution of Organic Overlayers Modified Platinum Single Crystal Interfaces in Acidic Medium**
Qiu, Yunsheng¹; Briega, Valentin¹; Yang, Juntao²; Hilpert, Felix²; Mayrhofer, Karl¹; Brummel, Olaf²; Libuda, Jörg²; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ²Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
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- 023 **Electrochemically triggered back-conversion of (Z)-4,4'-(diazene-1,2-diyl)bis(N,N-diethylaniline)**
Hussain, Zarah¹; Schatz, Dominic²; Oberhof, Nils³; Franz, Evanie¹; Wegner, Hermann A.²; Dreuw, Andreas³; Brummel, Olaf¹; Libuda, Jörg¹; ¹Interface Research and Catalysis, Erlangen Center for Interface Research and Catalysis, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany, ²Institute of Organic Chemistry, Justus-Liebig-Universität, Giessen/Germany, ³Interdisciplinary Center for Scientific Computing, Universität Heidelberg, Heidelberg/Germany
-
- 024 **Computational Modeling of Electrocatalytic Oxygen Evolution Reaction in Transition Metal Oxide Nanoparticles**
Troiano Feliciano, Gustavo¹; Auer, Alexander¹; ¹Max Planck Institut für Kohlenforschung, Mulheim an der Ruhr/Germany
-
- 025 **Electrochemical redox behavior of Pt(II)-N-heterocyclic carbene complexes: An in-situ IR spectroscopy study**
Yang, Juntao; Bergen, Alexander; Wick, Christian; Smith, Ana-Suncana; Meyer, Karsten; Brummel, Olaf; Libuda, Jörg
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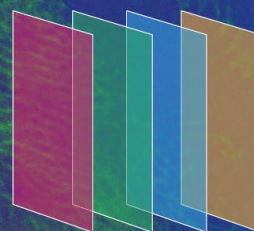
POSTER SESSION

- 026 **Red/blue-light responsive with prolonged charge carriers carbon nitride/TiO₂ heterointerface for multiple photoelectrocatalytic applications**
Fernandez Silva, Ingrid¹; Pulignani, Carolina²; Odutola, Jokotadeola³; Galushchinskiy, Alexey¹; F. Texeira, Ivo⁴; Isaacs, Mark⁵; Mesa, Camilo A.⁶; Scoppola, Ernesto⁷; These, Albert⁸; Badamdorj, Bolortuya¹; Muñoz-Márquez, Miguel Ángel⁹; Zizak, Ivo¹⁰; Palgrave, Robert¹¹; Tarakina, Nadezda V.¹; Gimenez, Sixto⁶; Brabec, Christoph¹²; Bachmann, Julien¹³; Cortes, Emiliano¹⁴; Tkachenko, Nikolai³; Savateev, Oleksandr¹; Jiménez Calvo, Pablo¹; ¹Department of Colloid Chemistry, Max-Planck-Institute of Colloids and Interfaces, Potsdam/Germany, ²Yusuf Hamied Department of Chemistry, University of Cambridge, Cambridge/Great Britain, ³Faculty of Engineering and Natural Sciences, Tampere University, Tampere/Finnland, ⁴Department of Chemistry, Federal University of São Carlos, São Carlos/Brazil, ⁵HarwellXPS, Research Complex at Harwell, Didcot/Great Britain, ⁶Institute of Advanced Materials (INAM), University Jaume I, Castello de la Plana/Spain, ⁷Department of Biomaterials, Max Planck Institute of Colloids and Interfaces, Potsdam/Germany, ⁸Institute of Materials for Electronics and Energy Technology (i-MEET), Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany, ⁹Chemistry Division, School of Science and Technology, University of Camerino, Via Madonna delle Carceri/Italy, ¹⁰Helmholtz-Zentrum Berlin für Materialien und Energie (HZB), Berlin/Germany, ¹¹Department of Chemistry, University College London, London/Great Britain, ¹²Helmholtz Institute Erlangen-Nürnberg (HI ERN), Erlangen/Germany, ¹³Chemistry of Thin Film Materials, IZNF, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany,; ¹⁴Nanoinstitute Munich, Faculty of Physics, Ludwig-Maximilians-Universität München, München/Germany
- 027 **Solvent-free fabrication method for the production of gas diffusion electrodes for stable and efficient CO₂ reduction to alcohols**
Chen, Qin hao¹; Kube, Alexander¹; Kopljär, Dennis¹; Friedrich, Kaspar Andreas¹; German Aerospace Center (DLR), Institute of Engineering Thermodynamics, Stuttgart/Germany
- 028 **Iridium incorporated in mixed-metal oxides as catalysts for acidic OER in PEM-water electrolyzers**
Pröhl, Timo¹; Franken, Tanja¹; ¹Friedrich-Alexander-Universität Erlangen-Nürnberg/Germany
- 029 **Enhancing Alkaline Membrane Water Electrolysis: Optimization of Electrodes with Non-Noble Metal Catalysts**
Pineti, Enado¹; Radev, Ivan¹; Hesse, Miriam¹; Wystemp, Lars¹; Manolova, Mila²; Sörgel, Seniz²; ¹The hydrogen and fuel cell center (ZBT GmbH), Duisburg/Germany, ²fem Forschungsinstitut Edelmetalle + Metallchemie, Schwäbisch Gmünd/Germany



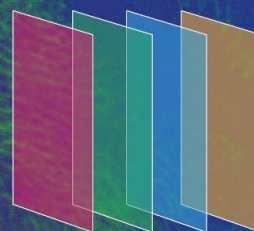
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- 030 **Laser-induced in-situ synthesis of metal nanoparticles in solid phase**
Wang, Huize¹; Pfeifer, Philipp²; Björk, Linnéa²; Ledendecker, Marc¹; ¹Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (HI ERN), Erlangen/Germany, ²Technical University of Munich, Straubing/Germany;
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- 031 **High-throughput screening of electrodes for the synthesis of bio-hybrid fuels**
Peirow Asfia, Mohammad¹; Nikolaienko, Pavlo¹; Mayrhofer, Karl¹; ¹Helmholtz-Institut Erlangen-Nürnberg for Renewable Energy, Erlangen/Germany
-
- 032 **Sulfur-doped carbon nitrides serve as disordered, visible-light responsive materials with enhanced optical properties for photoelectrocatalysis**
Jerigova, Maria¹; Markushyna, Yevheniia¹; F. Texeira, Ivo²; Badamdorj, Bolortuya¹; Isaacs, Mark³; Cruz, Daniel⁴; Lauerman, Iver⁵; Muñoz-Márquez, Miguel Ángel⁶; Tarakina, Nadezda V.¹; Lopez Salas, Nieves¹; Savateev, Oleksandr¹; Jiménez Calvo, Pablo¹; ¹Department of Colloid Chemistry, Max-Planck-Institute of Colloids and Interfaces, Potsdam/Germany; ²Department of Chemistry, Federal University of São Carlos, Brazil; ³HarwellXPS, Research Complex at Harwell, Rutherford Appleton Lab, Great Britain; ⁴Department of Inorganic Chemistry, Fritz-Haber-Institut der Max-Planck-Gesellschaft, ⁵Helmholtz-Zentrum Berlin für Materialien und Energie Department, Germany, ⁶Chemistry Division, School of Science and Technology, University of Camerino, Italy
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- 033 **Identifying the high-valent intermediates dominating the OER activity and trans-passive dissolution of a Cu-based electrocatalyst in alkaline medium**
García Diez, Raul¹; Wibowo, R.Enggar¹; Quevedo, Wilson¹; van der Merwe, Marianne¹; Kataev, Elmar¹; Lahn, Leopold²; Kasian, Olga²; Bär, Marcus¹; ¹Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin/Germany, ²Dept. Materials Sci. and Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
-
- 034 **Gas-Phase Synthesis of Nanostructured Support Materials for Electrodes in Electrolyser Technology**
Stahlmecke, Burkhard¹; Underberg, Martin¹; Spree, Mathias¹; Kunze, Frederik¹; Schnurre, Sophie Marie¹; Hülser, Tim¹; ¹Institut für Umwelt & Energie, Technik & Analytik e. V. (IUTA), Duisburg/Germany
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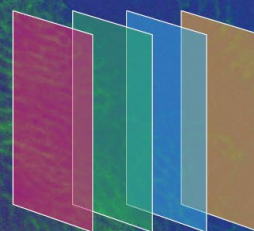
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- 035 **Investigating the Impact of Electrolyte Temperature on the Oxygen Evolution Reaction Efficiency of Ni-Co/NiFelt Nano Composite Electrode**
Niyati, Ataollah¹; Moranda, Arianna¹; Beigzadeh Arough, Pouya¹; Paladino, Ombretta¹;
¹Department of Civil, Chemical and Environmental Engineering, University of Genova, Genova/Italy
-
- 036 **Bipolar Plates in Proton-Exchange Membrane Water Electrolysis: Influences of Temperature and Fluoride Contamination on the Stability**
Fiedler, Lena¹; Ma, Tien-Ching¹; Fritsch, Birk¹; Risse, Jan H.²; Lechner, Michael²;
 Dworschak, Dominik¹; Merklein, Marion²; Mayrhofer, Karl J. J.¹; Hutzler, Andreas¹;
¹Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ²Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany
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- 037 **Carbon Cloth Electrodes for Vanadium Redox Flow Batteries and their Thermal Activation**
Scherer, Simon¹; Schilling, Monja²; Vocht, Marc P.³; Hermanutz, Frank³; Zeis, Roswitha¹;
¹Friedrich-Alexander University Erlangen-Nuremberg, Germany, ²Karlsruhe Institute of Technology (KIT), Germany, ³Deutsche Institute für Textil- und Faserforschung Denkendorf, Germany
-
- 038 **The oxygen reduction reaction at the interface between Pt and protic ionic liquids**
Rodenbücher, Christian¹; Chen, Yingzhen¹; Wippermann, Klaus¹; Korte, Carsten¹;
¹Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research, Jülich, Germany
-
- 039 **Watching electrochemistry at the nanoscale**
Körner, Andreas¹; Morales, A. Lucía¹; Fiedler, Lena¹; Finger, Selina¹; Fritsch, Birk¹;
 Mayrhofer, Karl J.J.¹; Hutzler, Andreas¹; ¹Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 040 **Electrospun Nanofiber Catalyst Materials for Oxygen Evolution Reaction in Acidic Water Electrolysis**
Kovács, Miklós Márton¹; Mayrhofer, Karl J. J.¹; Dworschak, Dominik¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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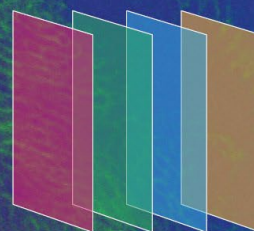
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- 041 **Towards Low Iridium Loading in Proton-Exchange Membrane Water Electrolysis: Full-Cell Performance of IrOx@TiO2 Core-Shell Particles in Anode Catalyst Layers**
Finger, Selina¹; Hoffmeister, Darius¹; Fiedler, Lena¹; Ma, Tien-Ching¹; Körner, Andreas¹; Zlatar, Matej¹; Fritsch, Birk¹; Witte-Bodnar, Kerstin²; Simon, Carl³; Götz, Alexander³; Apeleo Zubiri, Benjamin³; Spiecker, Erdmann³; Cherevko, Serhiy¹; Freiberg, Anna T. S.¹; Mayrhofer, Karl J. J.¹; Thiele, Simon¹; Hutzler, Andreas¹; van Pham, Chuyen¹;
¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ²Materials Diagnostics for H2 Technologies, Fraunhofer Institute for Microstructure of Materials and Systems IMWS, Halle/Germany, ³Institute of Micro- and Nanostructure Research (IMN) and Center for Nanoanalysis and Electron Microscopy (CENEM), Interdisciplinary Center for Nanostructured Films (IZNF), Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany
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- 042 **Hydroxide-based High Entropy Metal Organic Framework for Oxygen Evolution Reaction**
Roy, Arkendu¹; ¹Federal Institute for Materials Research and Testing (BAM), Berlin/Germany
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- 043 **Modeling oxygen bubble formation and transport in PEM water electrolysis**
Xie, Qingguang¹; Scheel, Thomas¹; Dhungana, Gaurab²; Aouane, Othmane¹; Harting, Jens¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ²Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany
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- 044 **Investigation of the hydrogen evolution capability of CuO/Cu2O nanowires grown on Copper foam for alkaline water splitting**
Vernekar, Yashashree¹; Fernandez Perez, Bibiana¹; Ragonese, Paola¹; Maurizio, Chiara¹; ¹Padova University, Padova/Italy
-
- 045 **Analysis of electrochemical isopropanol dehydrogenation on the PtRu/C catalyst**
Valeske, Moritz¹; van Pham, Chuyen¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Nuremberg/Germany
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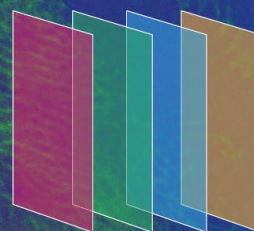
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- 046 **Evaluation of binder and membrane materials for electrocatalysis in electrochemical hydrogen pumps**
Marchfelder, Carla¹; Braig, Michael¹; Hager, Linus²; Stigler, Theresa²; Kerres, Jochen²; Thiele, Simon²; Zeis, Roswitha³; ¹Karlsruhe Institute of Technology, Helmholtz Institute Ulm, Ulm/Germany, ²Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ³Friedrich-Alexander-Universität Erlangen-Nürnberg, Department of Electrical, Electronics, and Communication Engineering, Germany
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- 047 **Activation of Electrodeposited OER Catalyst Layers by a Stainless Steel Support**
Deo, Yashwardhan¹; Thissen, Niklas¹; Seidl, Vera¹; Gallenberger, Julia²; Hofmann, Jan P.²; Mechler, Anna K.¹; ¹Electrochemical Reaction Engineering (AVT.ERT), RWTH Aachen University, Aachen/Germany, ²Surface Science Laboratory, Department of Materials and Earth Sciences, Technical University of Darmstadt, Darmstadt/Germany
-
- 048 **Degradation of electronic structure of oxygen evolution reaction model for perovskite electrocatalysts**
Teng, Zhenjie; Kleiner, Karin; Kaus, Anton; Maksumov, Muzaffar; Ying, Bixian; Gunkel, Felix; Florian, Hausen
-
- 049 **Quantification of step density on ion-eroded single-crystalline metal electrodes**
Škvára, Jan¹; Výhonský, Matyas¹; Samal, Pankaj Kumar¹; Mysliveček, Josef¹; ¹Department of Surface and Plasma Science, Charles University, V Praha 8 - Libeň/Czech Republic
-
- 050 **Preparation and transfer of well-defined model catalysts for energy conversion and storage: From ultrahigh vacuum into electrochemical cell**
Hübsch, Robert¹; Lykhach, Yaroslava¹; Brummel, Olaf¹; Libuda, Jörg¹; Samal, Pankaj Kumar²; ¹Interface Research and Catalysis, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany, ²Department of Surface and Plasma Science, Charles University, Prague/Czech Republic
-
- 051 **Influence of Cations and pH on the kinetics of Carbon dioxide Reduction Reaction in Acidic Electrolyte**
Menisa, Leta Takele¹; Schmid, Bernhard¹; Tempel, Hermann¹; Eichel, Rüdiger-A.¹; ¹Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research, Jülich/Germany
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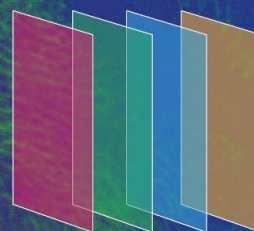
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- 052 **Structure-property relationships in Pt-Ceria model electrocatalytic systems**
 Fusek, Lukáš¹; Samal, Pankaj Kumar¹; Keresteš, Jiří¹; Khalakhan, Ivan¹; Johánek, Viktor¹; Lykhach, Yaroslava²; Libuda, Jörg²; Brummel, Olaf²; Mysliveček, Josef¹;
¹Charles University, Faculty of Mathematics and Physics, Department of Surface and Plasma Science, Praha/Czech Republic, ²Interface Research and Catalysis, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany
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- 053 **Constructing efficient 2-electron transfer ORR catalyst using carbon obtained from sewage sludge**
 Lourenco, Julio Cesar¹; Fortunato, Guilherme V.¹; Porto, Tulio P.²; Souto, Robson S.³; de Moraes, Nicolas P.³; Choi, Jisik¹; Rodrigues, Liana A.²; Rocha, Robson S.²; Lanza, Marcos R V.³; Ledendecker, Marc⁴; ¹Sustainable Energy Materials, Technical University Munich, Straubing/Germany, ²Lorena School of Engineering, University of São Paulo, Lorena/Brazil, ³São Carlos Institute of Chemistry, University of São Paulo, São Carlos/Brazil, ⁴Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Nuremberg/Germany
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- 054 **Optimizing Copper Cobalt Hydroxide Catalysts for Enhanced OER in Alkaline Electrolyzers: Composition, Characterization, and Reproducibility Study**
 Saei, Worawee¹; Pasel, Joachim¹; Korte, Carsten¹; Peters, Ralf¹; ¹Forschungszentrum Jülich GmbH, Institute of Energy and Climate Research, Jülich/Germany
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- 055 **Obtaining activated carbon from sugar cane bagasse for H₂O₂ electrogeneration material electrode**
 Porto, Tulio P.¹; Nogueira, Beatriz¹; Cruz, Igor PC¹; Souto, Robson S.²; de Moraes, Nicolas P.²; Fortunato, Guilherme V.³; Lourenco, Julio Cesar³; Rodrigues, Liana A.¹; Ledendecker, Marc⁴; Lanza, Marcos R. V.²; Rocha, Robson S.¹; ¹Lorena School of Engineering, University of São Paulo, Lorena/Brazil, ²São Carlos Institute of Chemistry, University of São Paulo, São Carlos/Brazil, ³Sustainable Energy Materials, Technical University Munich, Campus Straubing, Straubing/Germany, ⁴Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Nuremberg/Germany
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- 056 **Exploring the Influence of Membrane Thickness on Platinum and Iridium Catalysts in Gas Diffusion Electrodes for Oxygen Reduction and Oxygen Evolution Reactions**
 Marsel, Aleš¹; Hotko, Miha¹; Hodnik, Nejc¹; ¹National Institute of Chemistry Slovenia, Ljubljana/Slovenia
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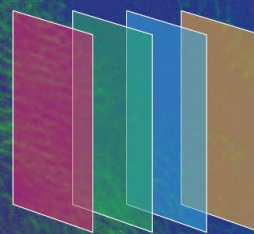
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- 057 **Investigating the Impact of Iron Impurities on Nickel Electrocatalysts for the Hydrogen Evolution Reaction**
Hotko, Miha¹; Hodnik, Nejc¹; Marsel, Aleš¹; Bele, Marjan¹; ¹National Institute of Chemistry Slovenia, Ljubljana/Slovenia
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- 058 **How the Complex Interface between Transport and Catalyst Layer Influences Water Electrolysis Performance**
Ma, Tien Ching¹; Hutzler, Andreas¹; Bensmann, Boris²; Hanke-Rauschenbach, Richard²; Thiele, Simon¹; ¹Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Nuremberg/Germany, ²Institute of Electric Power Systems, Leibniz University Hannover
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- 059 **Synthesis of crystalline valve metal oxide and precious metal oxide nanoparticles at high temperatures**
Pfeifer, Philipp¹; Malinovic, Marko¹; Ledendecker, Marc²; ¹Technische Universität München, Straubing/Germany, ² Helmholtz Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Nuremberg/Germany
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- 060 **Exploring Electrocatalytic Hydrogenation of Furfural on Pd/C Nanoparticles Using Electrochemistry Coupled With Mass Spectrometry**
Maselj, Nik¹; Jovanovski, Vasko¹; Trputec, Jan¹; Bele, Marjan¹; Jovanovič, Primož¹; Hodnik, Nejc¹; ¹Department of Materials Chemistry, National Institute of Chemistry, Ljubljana/Slovenia
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- 061 **Hydrogen Evolution Reaction on Alloys: The Role of Local Adsorption, d-Band, and Surface-Site Utilization for the Electrocatalytic Activity**
Schalenbach, Maximilian¹; Tesch, Rebekka¹; Kowalski, Piotr¹; Eichel, Rüdiger¹; ¹Forschungszentrum Jülich GmbH, Jülich/Germany
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- 062 **Connecting the MPS Permeability to the Spatial Distribution of CO₂**
Müller, Max¹; Tempel, Hermann¹; Eichel, Rüdiger-A.¹; Schmid, Bernhard¹; ¹Forschungszentrum Jülich GmbH, Jülich/Germany
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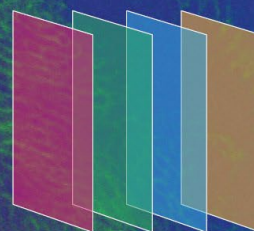
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- 063 **Stability of Cobalt Oxide under OER Conditions in Acidic Electrolytes**
 Priamushko, Tatiana¹; Franz, Evanie²; Guggenberger, Patrick³; Brummel, Olaf²; Libuda, Jörg²; Kleitz, Freddy³; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Nuremberg/Germany, ²Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany, ³University of Vienna, Vienna/Austria
-
- 064 **A Versatile Approach to Electrochemical In Situ Ambient Pressure X-ray Photoelectron Spectroscopy: Application to a Complex Model Catalyst**
 Lykhach, Yaroslava¹; Brummel, Olaf¹; Ralaizarisoa, Maryline²; Berasategui, Matias²; Kastenmeier, Maximilian¹; Fusek, Lukáš¹; Simanenkov, Alexander¹; Gu, Wenqing²; Clark, Pip C. J.²; Yivlialin, Rossella²; Sear, Michael J.²; Mysliveček, Josef³; Favaro, Marco²; Starr, David E.²; Libuda, Jörg¹; ¹Interface Research and Catalysis, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany, ²Helmholtz Zentrum Berlin für Materialien und Energie GmbH, Institute for Solar Fuels, Germany, ³Charles University, Department of Surface and Plasma Science, Prague/ Czech Republic
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- 065 **High-Throughput Synthesis and Electrochemical Screening of Ir_xCo_{1-x}O_y Electrocatalyst Libraries for Acidic Oxygen Evolution Reaction**
 Przybysz, Joanna¹; Jenewein, Ken¹; Minichová, Mária¹; Priamushko, Tatiana¹; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Nuremberg/Germany
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- 066 **Designing a Novel Setup for High-Throughput Investigations of Electrochemical Synthesis in Real Time**
 Cuomo, Angelina¹; Nikolaienko, Pavlo¹; Mayrhofer, Karl J. J.¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 067 **Experimental and Simulation Study of Doping Induced Enhancement of Activity and Stability for OER with Isomaterially Heterostructured MnO₂**
 Sadiq, Mohammad Mazhar¹; Jha, Anurag¹; Ganesh S. Pala, Raj¹; ¹IIT Kanpur, Kalyanpur, Kanpur/India
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- 068 **A Density Functional Theory Study of H₂ Adsorption on Bi₅₅, Ni₅₅ and Ni₅₃Bi₂ Nanoparticles**
 Ahmadi, Shideh¹; Mosey, Nicholas J.¹; ¹Queen's University at Kingston, Kingston/California
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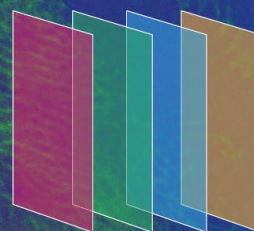
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- 069 **High-Throughput Electrochemical Half-Cell Testing of Realistic Catalyst Layers for Proton Exchange Membrane Water Electrolysis**
Röttcher, Nico C.¹; Mayrhofer, Karl J. J.¹; Dworschak, Dominik¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 070 **Unraveling the effect of potential and temperature in IrO₂ catalysts for oxygen evolution reaction (OER) using in-situ operando X-ray absorption spectroscopy**
Huang, Rui¹; Czioska, Steffen¹; Ehelebe, Konrad²; Geppert, Janis³; Escalera-López, Daniel²; Boubnov, Alexey⁴; Saraçi, Eriş¹; Mayerhöfer, Britta²; Krewer, Ulrike³; Cherevko, Serhiy²; Grunwaldt, Jan-Dierk¹; ¹Institute of Catalysis Research and Technology, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen/Germany, ²Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ³Institute for Applied Materials – Electrochemical Technologies, Karlsruhe Institute of Technology, Karlsruhe/Germany, ⁴Institute for Chemical Technology and Polymer Chemistry, Karlsruhe Institute of Technology, Karlsruhe/Germany
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- 071 **Enhancing Electrocatalytic Interfaces for Sustainable Hydrogen Production employing MXene: A Study of CuCo₂-LDH on V₂CTx**
Schmiedecke, Bastian¹; Wu, Bing²; Schultz, Thorsten¹; Sofer, Zdeněk²; Koch, Norbert³; Browne, Michelle¹; ¹Helmholtz-Zentrum Berlin für Materialien und Energie (HZB), Berlin/Germany, ²University of Chemistry and Technology Prague/Czech Republic, ³Humboldt-Universität zu Berlin, Department of Physics, Berlin/Germany
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- 072 **MXene supported nickel-iron catalysts for water splitting**
Zuber, Axel¹; Browne, Michelle P.¹; ¹Helmholtz Young Investigator Group Electrocatalysis: Synthesis to Devices, Berlin/Germany
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- 073 **Dynamic transport and interfacial studies of Ag electrodes in CO₂ electrochemical conversion**
Ma, Chaoqun¹; El-Nagar, Gumaa¹; Mayer, Matthew¹; ¹Helmholtz-Zentrum Berlin für Materialien und Energie (HZB), Berlin/Germany
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- 074 **Theoretical Study of Nitrogen Reduction over MXenes**
Singh, Diwakar¹; Razzaq, Samad¹; Exner, Kai S.¹; ¹Universität Duisburg-Essen, Essen/Germany
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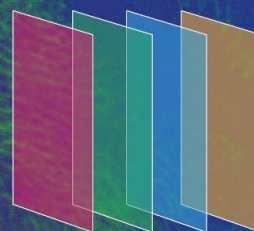
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- 075 **Attaining substantially enhanced oxygen evolution reaction rates on Ni foam catalysts in a gas diffusion electrode setup**
Berner, Etienne¹; Wiberg, Gustav K. H.¹; Arenz, Matthias¹; ¹University of Bern, Bern/Switzerland
-
- 076 **COBALT-PHOSPHORUS CATALYSTS FOR HYDROGEN GENERATION FROM SODIUM BOROHYDRIDE SOLUTION**
Amber, Huma¹; Tamašauskaitė-Tamašiūnaitė, Loreta¹; Sukackienė, Zita¹; Vaičiūnienė, Jūratė¹; Norkus, Eugenijus¹; ¹Center for Physical Sciences and Technology (FTMC), Vilnius/Lithuania
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- 077 **On-Line Dissolution Stability Study of Graphene-Modified Pt(111)**
Briega-Martos, Valentin¹; Lloret, Vicent¹; Maier, Maximilian¹; Hilpert, Felix²; Escalera-Lopez, Daniel¹; Böhm, Thomas¹; Brummel, Olaf²; Libuda, Jörg²; Thiele, Simon¹; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany, ²Interface Research and Catalysis, ECRC, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany
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- 078 **Electronic and Ionic Perturbations at Electrocatalyst Nanoparticles Induced by the Support**
Zhang, Yufan¹; Binninger, Tobias¹; Huang, Jun¹; Eikerling, Michael¹; ¹Forschungszentrum Juelich, Juelich, Germany
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- 079 **Effect of the Synthesis Route and Co Coverage on Co / Ti3C2Tx Materials for the Oxygen Evolution Reaction**
Can Kaplan¹, Ricardo Mogollon Restrepo¹, Thorsten Schultz^{2,3}, Ke Li⁴, Francisco Garcia-Moreno⁵, Paul H. Kamm⁵, Valeria Nicolosi⁴, Norbert Koch^{2,3}, Michelle P. Browne¹; ¹Helmholtz Young Investigator Group Electrocatalysis: Synthesis to Devices, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin/Germany; ²Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin/Germany; ³Institut für Physik & IRIS Adlershof, Humboldt-Universität zu Berlin, Berlin/Germany, ⁴School of Chemistry, CRANN and AMBER Research Centres, Trinity College Dublin, College Green, Dublin/Ireland, ⁵Abteilung Mikrostruktur- und Eigenspannungsanalyse, Helmholtz Zentrum Berlin für Materialien und Energie GmbH, Berlin/Germany
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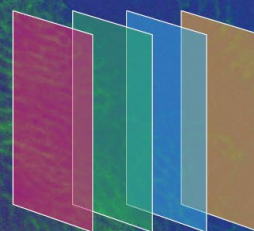
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- 080 **The Relationship Between Activity and Stability of Iridium:Ruthenium Catalysts in Proton Exchange Membrane Water Electrolysis**
Igel, Carolin Sophie¹; Milosevic, Maja¹; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 081 **Influence of Different Operating Conditions on Iridium Dissolution in a Proton Exchange Membrane Water Electrolyzer**
Milosevic, Maja¹; Winkelmann, Leonard¹; Thiele, Simon¹; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 082 **Modified Ni foam for the electrooxidation of bio-sourced compounds**
Rafaïdeen, Thibault¹; Napporn, Têko¹; Coutanceau, Christophe¹; ¹IC2MP CNRS, Poitiers/France
-
- 083 **Development of PtM-(SnO₂)/C active catalyst for the hydrogen oxidation reaction (HOR) in the presence of CO**
Bouho, Franck¹; Napporn, Têko¹; Coutanceau, Christophe¹; ¹IC2MP CNRS, Poitiers/France
-
- 084 **Bifunctional ternary Al-Fe-Ni electrocatalysts for critical raw material-free water electrolysis**
Restivo, Joao¹; Dias, Dulce¹; Silva Sousa, Juliana Patrícia¹; ¹International Iberian Nanotechnology Laboratory, Braga/Portugal
-
- 085 **Selective capture and conversion of carbon dioxide on carbon-based nanocomposites**
Hetze, Kai¹; Schutjajew, Konstantin¹; Oschatz, Martin¹; ¹Friedrich-Schiller Universität Jena, Jena/Germany
-
- 086 **Dynamic operation of a zero-gap CO₂ electrolyzer**
Samu, Angelika Anita¹; Endrődi, Balázs¹; Janáky, Csaba¹; ¹University of Szeged, Szeged/Hungary
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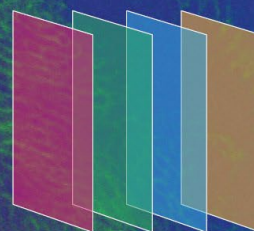
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- 087 **Nitrogen Sorption and Electrochemical Ammonia Synthesis at the Carbon/Ionic Liquid Interface**
Schutjajew, Konstantin¹; Nortmeyer, Lucas¹; Prykhodskaya, Sofiia¹; Troschke, Erik¹; Oschatz, Martin¹; ¹Friedrich-Schiller Universität Jena, Jena/Germany
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- 088 **Nano-Porous High Entropy Oxide Bifunctional Electrocatalysts as an Air Cathode for Rechargeable Zinc-Air Batteries**
Ozgur, Cagla¹; Toparli, Cigdem¹; ¹Middle East Technical University (METU), Ankara/Türkiye
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- 089 **Multi-Cationic High Entropy Perovskite Oxides for Electrocatalytic Oxygen Evolution and Oxygen Reduction Reactions**
Erdil, Tuncay¹; Toparli, Cigdem¹; ¹Middle East Technical University (METU), Ankara/Türkiye
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- 090 **Modulating The Product Distribution Of The Electrochemical Reduction Of CO₂ Using Organic Modifiers**
Parada Villarroel¹; Walter Agustin¹; Sajevec, Urban¹; Nikilaienko, Pavlo¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 091 **Investigation of cation-effect on the high-entropy spinel oxides as a bifunctional electrocatalyst for rechargeable zinc-air batteries**
Geyikci, Uygur¹; Toparli, Cigdem¹; ¹Middle East Technical University (METU), Ankara/Türkiye
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- 092 **NiRu-based/MXene Hybrid Catalysts: Development for Oxygen Evolution Reactions**
Aktürk, Merve¹; Browne, Michelle¹; ¹Helmholtz Young Investigator Group Electrocatalysis: Synthesis to Devices, Berlin/Germany
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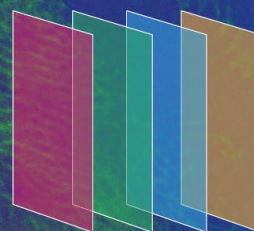
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- 093 **Probing the role of iridium (III) oxide in oxygen evolution reaction (OER) by in situ XPS**
Ciocci, Paolo¹; Kurt, Merve²; Czioska, Steffen¹; Velasco-Velez, Juan Jesus³; Huang, Rui¹; Boubnov, Alexey⁴; Escalera-López, Daniel⁵; Saraçi, Eriş¹; Cherevko, Serhiy⁵; Grunwaldt, Jan-Dierk²; ¹Institute of Catalysis Research and Technology (IKFT), Eggenstein-Leopoldshafen/Germany, ²Institute of Chemical Technology and Polymer Chemistry (ITCP), Karlsruhe/Germany, ³Department of Inorganic Chemistry, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin/Germany, ⁴Institute of Nanotechnology, Eggenstein-Leopoldshafen/Germany, ⁵Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 094 **AuxPdy dissolution in 1M HX (X= Cl, Br, I) electrolyte**
Lopes Munhos, Renan¹; A. Cipriano, Luis²; Rossmeisl, Jan²; Arenz, Matthias¹; ¹Department for Chemistry, Biochemistry and Pharmaceutical Sciences, University of Bern, Bern/Switzerland, ²Department of Chemistry, Center for High Entropy Alloy Catalysis, University of Copenhagen, Copenhagen/Denmark
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- 095 **On the stability of La_{0.8}Sr_{0.2}CoO (LSCO) and CoO oxygen evolution electrocatalysts in alkaline solutions**
Xing, Da¹; Oliveira, Andre¹; Zhao, Dongn²; Kucklick, Leander¹; Mertens, Stijn²; Hoster, Harry¹; ¹Universität Duisburg-Essen, Duisburg/Germany, ²Lancaster University, Bailrigg, Lancaster/Great Britain
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- 096 **Ternary alloys with reduced Ir loading for the oxygen evolution reaction**
Lahn, Leopold¹; Saveleva, Viktoriia A.²; Vorlaufer, Nora³; Khanchandani, Heena³; Felfer, Peter³; Kasian, Olga¹; ¹Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Erlangen/Germany, ²The European Synchrotron - ESRF, Grenoble/France, ³Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/Germany
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- 097 **Recycling of cobalt and graphite from spent Li-ion batteries as raw material for oxygen reduction reaction electrocatalyst**
Kazemi, Maryam¹; Liivand, Kerli²; Prato, Mirko³; Vacek, Petr⁴; Walmsley, John⁴; Dante, Silvia³; Divitini, Giorgio⁵; Kruusenberg, Ivar²; ¹University of Duisburg-Essen, Duisburg/Germany, ²National Institute of Chemical Physics and Biophysics, Estland, ³Materials Characterization Facility, Istituto Italiano di Tecnologia, Italy, ⁴Department of Materials Science and Metallurgy, University of Cambridge, Great Britain, ⁵Department of Materials Science and Metallurgy, University of Cambridge, Italy
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- 098 **Innovative Catalyst Strategies for Electrochemical Water Splitting**
Zlatar, Matej¹; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 099 **Accelerating Real-Time Analysis of Gas Diffusion Electrodes Using Different Coupled Mass Spectrometry Techniques**
Reichmann, Ina¹; Lloret, Vicent¹; Ehelebe, Konrad¹; Cherevko, Serhiy¹; ¹Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy, Forschungszentrum Jülich GmbH, Erlangen/Germany
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- 100 **Simultaneous Activation of Different Coordination Sites in Single-Phase FeCoMo3O8 for the Oxygen Evolution Reaction**
 Chongyan Hao¹; Xiaoning Li¹; Haoliang Huang¹; Liangbing Ge¹; Zhengping Fu¹; Yalin Lu¹; Yun Wang¹; Shujun Zhang¹; Zhenxiang Cheng¹; ¹Institute for Superconducting and Electronic Materials, University of Wollongong, Australia
-
- 101 **Conductivity and Gas Crossover in PEM Electrolyzer: The Role of MEA Conditioning**
Javed, Ali¹; Treutlein, Leander¹; Karl, André¹; Jodat, Eva¹; Eichel, Rüdiger-A.¹; ¹Forschungszentrum Jülich GmbH, Fundamentals of Electrochemistry IEK-9, Jülich/Germany
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- 102 **Structural characterization of MEAs in PEM water electrolyzer via XRD and USAXS**
Kiran, Kiran¹; Wolf, Niklas¹; Windmüller, Anna¹; Karl, André¹; Jodat, Eva¹; Eichel, Rüdiger-A.¹; ¹Forschungszentrum Jülich GmbH, Fundamentals of Electrochemistry IEK-10, Jülich/Germany
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- 103 **H₂ generation in CuO/Cu₂O thin films via plasmonic catalysis**
Kumar Ranjan, Ashish¹; ¹Indian Institute of Technology (BHU), Varanasi/India
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- 104 **Intensified carbon capture and electrolysis**
Gratzl, Raphael^{1,2}; Philipp Stadler¹; Bastian Etzold²; ¹Net Zero Emission Labs GmbH, Rohrdorf/Germany; ²Friedrich-Alexander-Universität Erlangen-Nürnberg, Power-to-X Technologies, Fürth/Germany
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- 105 **Automated Electrochemical Infrared Reflection Absorption Spectroscopy - Research Showcase Redox-Flow Batteries**
Daniel Schauermann¹, Giovanni Rossetto^{1,2}, Rosamaria Marrazzo², Laura Meda², Olaf Brummel¹, Jörg Libuda¹; ¹Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen Center for Interface Research and Catalysis, Erlangen/Germany; ²Eni SpA, NOLAB/C - Physical Chemistry For New Energies & Fusion Laboratories, Novara/Italy
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- 106 **Intermediate State of Dense Ru Assembly Captured by High Temperature Shock for Durable Ampere Level Hydrogen Production**
 Cui, Baihua¹; ¹National University of Singapore, Singapore/Singapore
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- 107 **Understanding and Tuning the Solid Electrolyte Interface in the Electrochemical Lithium-Mediated Ammonia Synthesis**
Herzog, Antonia¹; Iriawan, Haldrian¹; Shao-Horn, Yang¹; ¹MIT Electrochemical Energy Lab, Massachusetts Institute of Technology, Cambridge/USA
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- 108 **Impact of Ti3C2 MXenes synthesis towards electrochemical reactions**
A. Emerenciano, Aline¹; Browne, Michelle¹; ¹Helmholtz-Zentrum Berlin für Materialien und Energie GmbH (HZB), Berlin/Germany
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- 109 **Understanding Flooding in Cu-GDE Based CO₂ Electrolyzers Via Real Time Mass Spectroscopy**
Sajevic, Urban¹; Parada Villarroel, Walter Augustin¹; Nikolaichenko, Pavlo¹; Mayrhofer, Karl¹; ¹Helmholtz Institute Erlangen-Nürnberg for Renewable Energy (HI ERN), Erlangen/Germany
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- 110 **Understanding the differences between platinum and platinum-alloy catalyst systems for oxygen reduction reaction in PEM fuel cells**
Gatalo, Matija¹; Tina Đukic¹; Léonard Jean Moriau¹; Michal Ronovský¹; Iva Klofutar¹; Martin Šala¹; Luka Pavko¹; Francisco Javier González López¹; Francisco Ruiz-Zepeda¹; Jakub Drnec¹; Nejc Hodnik¹; ¹ReCatalyst d.o.o., Ljubljana/Slovenia; ²National Institute of Chemistry, Ljubljana/Slovenia
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- 111 **CO₂ reduction cells using charge transport in the vicinity of the catalyst to their advantage**
Schmid, Bernhard¹; Köllmann, Lina¹; Tempel, Hermann¹; Eichel, Rüdiger-A.¹; ¹Institute of Energy and Climate Research - Fundamental Electrochemistry (IEK-9), Forschungszentrum Jülich GmbH, Jülich/Germany
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