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| <i>Wenzhuo Wu</i>                                                                                                                                                                                                               |      |
| (Invited) Electric-Driven Preconcentrating Microfluidic Device for Enhancing Biomolecular Sensing .....                                                                                                                         | 1769 |
| <i>Yu-Jui Fan</i>                                                                                                                                                                                                               |      |
| Self-Powered Wearable Pressure Sensor System for Smart Healthcare Applications .....                                                                                                                                            | 1770 |
| <i>Parag Parashar, Yao-Hsuan Tseng, Zong-Hong Lin</i>                                                                                                                                                                           |      |
| Effect of Amino Acids Used As Intercalating Agents on Electro-Magnetic Properties of Montmorillonite Clay Nanostructures .....                                                                                                  | 1771 |
| <i>Svetlana V. Kilina, Dinesh Thapa, Victoria Oas</i>                                                                                                                                                                           |      |
| Solid-State Electrodes Towards a Real-Time Sensor Array for Health Monitoring .....                                                                                                                                             | 1772 |
| <i>Michael Brothers, Jennifer Leung, Kiera E. Gazica, Jorge Chavez, Steve Kim</i>                                                                                                                                               |      |
| Innovative Drug Screening Platform: The Triboelectric Frontier.....                                                                                                                                                             | 1773 |
| <i>Anindita Ganguly, Yu-Ying Cheng, Zong-Hong Lin, Lee-Wei Yang</i>                                                                                                                                                             |      |
| Detection of Thiocholine for Pesticide Qualification Using Indium-Tin-Oxide-Coated Vertically Aligned Silicon Nanowires Extended Gate Field-Effect Transistor .....                                                             | 1774 |
| <i>Yu-Ting Wei, Yu-Chan Chao, Shu-Ping Lin</i>                                                                                                                                                                                  |      |

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| Impact of Water-Water Correlation at Suspended Graphene/Water Interface Under Different Electro-Modulated.....                                                    | 1776 |
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| (Invited) Engineering of Nanostructured Aluminum-Based and Polymer-Based Platforms for SERS Sensing .....                                                         | 1780 |
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| (Invited) Point-of-Care Biomembrane-Based Electronic Sensors .....                                                                                                | 1782 |
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| (Keynote) Soft Microfluidic Analysis Systems for the Skin .....                                                                                                   | 1783 |
| <i>John Rogers</i>                                                                                                                                                |      |
| (Invited) Processing and Evaluation of Microneedle-Based Sensors for Biomedical Sensing.....                                                                      | 1784 |
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| (Invited) Organic Electrochemical Transistors for Marine Sensing .....                                                                                            | 1785 |
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| <i>Amay J Bandodkar</i>                                                                                                                                           |      |
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| (Invited) Supramolecular Hydrogels for Fabrications of Wearable Sensors and Medical Scaffolds .....                                                               | 1789 |
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| <i>Nazek El-Atab, Aljawharah Alsharif</i>                                                                                                                         |      |
| (Invited) Deformable Electronics Based on Strain-Engineered Van Der Waals Materials .....                                                                         | 1792 |
| <i>Sungwoo Nam</i>                                                                                                                                                |      |
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| <i>Arshad Khan, Anindita Ganguly, Yan-Tsz Huang, Zong-Hong Lin</i>                                                                                                |      |
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| <i>Yi Hao Chiu, Yi-Ting Guo, Mia Rinawati, Ching-Cheng Chang, Ling-Yu Chang, Min-Hsin Yeh</i>                                                                     |      |
| Developing Field Effect Transistor Sensors Based on DNA Probes to Detect Staphylococcus Lugdunensis Bacteria .....                                                | 1795 |
| <i>Rohan Thokchom, Yi-De Su, Huan-Wei Tseng, Vishal Mani Kalaimani, Chia Kai Lin, Guan-Cheng Zeng, Yu-Lin Wang</i>                                                |      |
| Development of Metal-Oxide-Metal Micro-Well Array Biosensors for Highly Sensitive Detection of Covid-19.....                                                      | 1797 |
| <i>Qiu-Zhe Xie, Chia-Fen Chu, Meng-Lin You, Chih-Ting Lin</i>                                                                                                     |      |

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| <i>Changsheng Wu</i>                                                                                                                                                                         |      |
| Investigation of Electrical Impedance of Human Breast Cancer Cells and Osteosarcoma Cells .....                                                                                              | 1800 |
| <i>Cheng-Feng Tsai, Yu-Ting Li, Shu-Ping Lin</i>                                                                                                                                             |      |
| The Self-Powered Thermoelectric System Driving an Electric Field for Raman-Spectrum Glucose Quantitative Analysis.....                                                                       | 1801 |
| <i>Jing-Siang Shih, Kuei-Lin Liu, Zong-Hong Lin</i>                                                                                                                                          |      |
| Next Generation Heterogeneous 3D IC Chip Packaging.....                                                                                                                                      | 1802 |
| <i>Alvin Winata, Chia Kai Lin, Vishal Mani Kalaimani, Yu-Lin Wang</i>                                                                                                                        |      |
| Increasing Graphene Selectivity for H <sub>2</sub> O <sub>2</sub> Electro-Production Using Phosphorus Doped Carbon Nitride Quantum Dots as Self-Antibiofouling Dissolved Oxygen Sensor ..... | 1803 |
| <i>Kung-Hsing Chen, Sofiannisa Aulia, Mia Rinawati, Ching-Cheng Chang, Ling-Yu Chang, Min-Hsin Yeh</i>                                                                                       |      |
| Exploring Neuromorphic Computing with Double-Gate Floating Device Based on Van Der Waals Heterostructures.....                                                                               | 1804 |
| <i>Advaita Ghosh, Yen-Fu Lin, Shu-Ping Lin</i>                                                                                                                                               |      |
| (Invited) Cardiac Engineering: Optical Mapping in Cellular Communication.....                                                                                                                | 1805 |
| <i>Yen-Ling Sung, Yuan-Si Tsai, Chu-Ling Chang, Chih-Kuan Chen, Chih-Hua Wang, Yi-Chun Lin</i>                                                                                               |      |
| (Invited) MoS <sub>2</sub> Photodetectors for Near-Infrared Biosensing Applications .....                                                                                                    | 1806 |
| <i>Xiaogan Liang, Seungjun Ki, Younggeun Park, Katsuo Kurabayashi</i>                                                                                                                        |      |
| (Invited) Tuning Chirality of Graphene Quantum Dots to Empower Medical Imaging and Theranostic Applications .....                                                                            | 1808 |
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| (Invited) 3D Printing for Tissue Scaffolds with Tunable Mechanical Durability and Sensing Capabilities .....                                                                                 | 1809 |
| <i>Kenan Song, Yuxiang Zhu, Sri Vaishnavi Thummalapali, Nathan Fonseca</i>                                                                                                                   |      |
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| (Invited) Revolutionizing Diagnostic Access: Emerging Advanced Manufacturing Technologies for Wearable Sensors.....                                                                          | 1811 |
| <i>Tyler R Ray</i>                                                                                                                                                                           |      |
| (Invited) 3D Printing-Assisted Casting of Conducting Polymers for Bioelectronics .....                                                                                                       | 1812 |
| <i>Yue Wang</i>                                                                                                                                                                              |      |
| (Invited) III-Nitride Ultraviolet LEDs and Lasers for Applications in Biology and Medicine.....                                                                                              | 1813 |
| <i>Jing Zhang, Bryan Melanson, Matthew Seitz, Jacob Boisvere</i>                                                                                                                             |      |
| High Surface Area Metal Oxide Enhanced Self-Powered Microfluidic Device for Real-Time Pathological Detection.....                                                                            | 1814 |
| <i>Kuldeep Kaswan, Jia -Cheng Lin, Yu-Jui Fan, Zong-Hong Lin</i>                                                                                                                             |      |

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| Impact of Silicon Dioxide Periodic Grating Structure on Electrical Properties of Graphene.....                                                                  | 1815 |
| <i>Wei-Yu Long, Po-Han Shia, Yuxuan Lu, Chih-Ting Lin</i>                                                                                                       |      |
| Phosphorus-Doped g-C <sub>3</sub> N <sub>4</sub> Induces Self-Polarization PVDF for High-Performance Triboelectric Nanogenerator As Wearable Power Sources..... | 1817 |
| <i>Yen-Shuo Chiu, Yu-Hsin Chang, Ching-Cheng Chang, Ling-Yu Chang, Min-Hsin Yeh</i>                                                                             |      |
| Enhanced Detection of <i>Klebsiella Pneumoniae</i> Using Electric-Double-Layer FET Sensor: Rapid, Temperature-Boosted Probe-Target Binding Analysis .....       | 1818 |
| <i>Vishal Mani Kalaimani, Guan-Cheng Zeng, Chia Kai Lin, Yu-Lin Wang</i>                                                                                        |      |
| Detection of Hydrogen Ions Resulting from the Inhibition of Acetylcholinesterase Using Indium Tin Oxide-Coated Nanostructures for Pesticide Sensing.....        | 1820 |
| <i>Yi-Syuan Zeng, Yu-Ting Wei, Yu-Chan Chao, Shu-Ping Lin</i>                                                                                                   |      |
| Electrokinetics with Surface-Enhanced Raman Spectroscopy for Bacterial Identification in Wastewater .....                                                       | 1822 |
| <i>Yirui Zhang, Liam Herndon, Punnag Padhy, Baba Ogunlade, Alexandria Boehm, Jennifer Dionne</i>                                                                |      |

## 101-LOW TEMPERATURE WATER ELECTROLYSIS (LT-WE) FOR H<sub>2</sub> PRODUCTION 2

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| <i>Andrew Akbashev</i>                                                                                                                                                                                                                                                                                                   |      |
| Probing Mixed Phase Metallic Ni/Amorphous Nickel Phosphide Nanocatalysts during Oxygen Evolution Reaction Using Operando X-Ray Absorption Spectroscopy .....                                                                                                                                                             | 1824 |
| <i>David Thompson, Sarah Meixin York, Adam S. Hoffman, Jiyun Hong, Simon R. Bare, Jingyi Chen</i>                                                                                                                                                                                                                        |      |
| Key Role of Oxidising Species for Water Oxidation on Iridium Oxides Revealed By Time-Resolved Optical and X-Ray Spectroscopies .....                                                                                                                                                                                     | 1825 |
| <i>Caiwu Liang, Reshma R Rao, Katrine Louise Svane, Benjamin Moss, Søren Bertelsen Scott, Mary P. Ryan, Jan Rossmeisl, James Durrant, Ifan Stephens</i>                                                                                                                                                                  |      |
| (Invited) Structural Transformations of OER Catalysts during Activation and Operation .....                                                                                                                                                                                                                              | 1826 |
| <i>Jakub Drnec, Tim Wiegmann, Olaf M. Magnussen, Fabio Dionigi, Peter Strasser, Hridya Nedumkulam, Tomas Hrbek, Peter Kúš</i>                                                                                                                                                                                            |      |
| Investigating the Catalyst/Ionomer Interface in PEM Water Electrolysis Using Microelectrodes .....                                                                                                                                                                                                                       | 1828 |
| <i>Grace C. Anderson, Andrew W. Tricker, Jason Keonhag Lee, Alexis T. Bell, Xiong Peng, Rangachary Mukundan, Adam Z. Weber</i>                                                                                                                                                                                           |      |
| Comprehensive Characterization of Porous Transport Electrodes with SEM, XPS, and ToF-SIMS .....                                                                                                                                                                                                                          | 1829 |
| <i>Genevieve Stelmachovich, Lonneke Van Eijk, Jayson Foster, Michael Walker, Lei Ding, Feng Yuan Zhang, Adam Paxson, Svitlana Pylypenko</i>                                                                                                                                                                              |      |
| Automated Microstructural Analysis of Anodic Catalyst Layers in Proton Exchange Membrane Water Electrolyzers (PEMWEs) Using Python-Based Image Processing Framework.....                                                                                                                                                 | 1830 |
| <i>Mariah Batoool, Maryam Ahmadi, Oluwafemi Joseph Sanumi, Ravel Larose, Jeronimo Horstmann, Selina Klose, Irene Franzetti, J. V. Yang, Abdurrahman Yilmaz, Chance Parrish, Robin Rice, Radhika Iyer, Jayson Foster, Svitlana Pylypenko, Hui Xu, Scott A Mauger, Tom Smolinka, Ulf Groos, Nada Zamel, Jasna Jankovic</i> |      |

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| Estimation of Onset Potential for Oxygen Evolution Reaction at Platinum Surface Via Discharge of the Adsorption Capacitance of Intermediate Species .....                                                   | 1831 |
| <i>Maurya Gyanprakash, Ramanathan Srinivasan, Raj Ganesh Pala</i>                                                                                                                                           |      |
| Benchmarking Local pH of Electrocatalysts for Water Electrolysis Using the Rotating Ring-Disk Electrode Technique .....                                                                                     | 1832 |
| <i>Wen Yu Wu, David P. Wilkinson, Elod L. Gyenge</i>                                                                                                                                                        |      |
| Identification of Local Overpotentials and Their Spatial Distributions in Polymer Electrolyte Water Electrolyzers.....                                                                                      | 1834 |
| <i>Anirban Roy, Frida H Roenning, Douglas S Aaron, Matthew M Mench</i>                                                                                                                                      |      |
| (Invited) Dynamic Modeling of Liquid Alkaline Water Electrolyzers: From Laboratory Cells to Industrial-Sized Stacks .....                                                                                   | 1836 |
| <i>Thomas Turek, Maik Becker, Fabian Kirstein, Felix Gäde, Jörn Brauns, Lukas Lütke</i>                                                                                                                     |      |
| Simulation of a Passive Osmosis-Integrated Electrolyzer for Seawater Electrolysis .....                                                                                                                     | 1837 |
| <i>Masoom Ghasemi, Mohammed Al Murisi, William Earl Mustain, Sirivatch Shimpalee</i>                                                                                                                        |      |
| Distribution of Relaxation Times Analysis of PEMFC through Loewner Framework: A Direct and Regularization Free Approach .....                                                                               | 1839 |
| <i>Bansidhar Patel, Antonio Sorrentino, Ion Victor Gosea, Tanja Vidakovic-Koch, Athanasios C. Antoulas</i>                                                                                                  |      |
| Multiphase Modeling of Enhanced Bubble Evacuation in Alkaline Water Electrolysis Cells Based on Laterally-Graded 3-D Electrodes.....                                                                        | 1841 |
| <i>Kevin Van Droogenbroek, Christos Georgiadis, Joris Proost</i>                                                                                                                                            |      |
| Aspects of Reduced Performance of Proton-Exchange-Membrane Water Electrolysis Via Continuum Modeling.....                                                                                                   | 1843 |
| <i>Arthur Dizon, Elliot Padgett, Anthony Adesso, Ramchandra Gawas, Priyamvada Goyal, Douglas I. Kushner, Jacob A Wrubel, Xiong Peng, Shaun M Alia, Rangachary Mukundan, Bryan S. Pivovar, Adam Z. Weber</i> |      |
| Distinguishing Electrochemical Processes in PEM Electrolysis By Impedance Modeling – Distribution of Relaxation Times .....                                                                                 | 1845 |
| <i>Ai-Lin Chan, Haoran Yu, Shaun M Alia</i>                                                                                                                                                                 |      |
| Two-Dimensional Modeling of Proton Exchange Membrane Water Electrolyzer .....                                                                                                                               | 1847 |
| <i>Foysal Ahmed Neerob, Ugur Pasaogullari, Aman Uddin</i>                                                                                                                                                   |      |
| Numerical Investigation on Two-Phase Flow-Electrochemical Reaction Coupling in PEM Water Electrolyzers Porous Transport Layer Under High Operating Pressures.....                                           | 1849 |
| <i>Qiu Yang, Ruiming Zhang, Pang-Chieh Sui</i>                                                                                                                                                              |      |
| Numerical Investigation of Flow Distribution in PEMFC and Pemwe Stacks Considering Two-Phase Flow in the Stack Headers.....                                                                                 | 1851 |
| <i>Huiyan Zuo, Qiu Yang, Po-Ya Abel Chuang, Ruiming Zhang, Pang-Chieh Sui</i>                                                                                                                               |      |
| Lattice Boltzmann Model Investigation of Simultaneous Imbibition/Evaporation in PEMFC Cathodic Catalyst Layer Using Reconstructed 3D Image Data from Transmission Electron Microscopy .....                 | 1853 |
| <i>Supriya Bhaskaran, Jasna Jankovic, Vikranth Kumar Surasani, Tanja Vidakovic-Koch, Evangelos Tsotsas, Nicole Vorhauer-Huget</i>                                                                           |      |

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| (Invited) Targeted Research to Develop Next Generation PEM Water Electrolyzers .....                                                                                                                                                                           | 1855 |
| <i>Guido Bender, Ricardo Filipe Paz Moldes Duarte, Chang Liu, Sam Ware, James L. Young, David A. Cullen, David Arregui-Mena, Iryna Zenyuk, Jack Todd Lang, Chaiwat Engtrakul, Shaun M Alia, Alex Badgett, Bryan S. Pivovar, Elliot Padgett, Jacob A Wrubel</i> |      |
| (Invited) Design Principles and Operation of PEM Electrolyzers for Power-to-Gas Technologies .....                                                                                                                                                             | 1856 |
| <i>Peter Strasser</i>                                                                                                                                                                                                                                          |      |
| (Invited) Overview of Ion-Conducting Polymer Membranes and Membrane Separators for Water Electrolysis .....                                                                                                                                                    | 1857 |
| <i>Chulsung Bae</i>                                                                                                                                                                                                                                            |      |
| (Invited) Affordable Green Hydrogen from Alkaline Water Electrolysis: An Industrial Perspective .....                                                                                                                                                          | 1858 |
| <i>Kasper T. Therkildsen</i>                                                                                                                                                                                                                                   |      |
| (Invited) On the Importance of the Catalyst- and Porous Transport Layer Interface on Pewe Performance.....                                                                                                                                                     | 1859 |
| <i>Felix N. Buechi, Carl Cesar Weber, Tobias Schuler, Jacob A Wrubel, Guido Bender</i>                                                                                                                                                                         |      |
| (Invited) Fruitful and False Analogies between Polymer Electrolyte Fuel Cells and Electrolyzers .....                                                                                                                                                          | 1860 |
| <i>Cortney Mittelsteadt, Fan Yang, Adam Paxson, Matthew Sweetland</i>                                                                                                                                                                                          |      |
| (Invited) Integrated Approach of Modeling, X-Ray and Electrochemical Characterization to Understand Low Iridium Loading Catalyst Layers Integration and Durability .....                                                                                       | 1861 |
| <i>Iryna Zenyuk</i>                                                                                                                                                                                                                                            |      |
| Benchmark and Roadmap for Low Temperature Water Electrolysis for Green H <sub>2</sub> Production and Applications.....                                                                                                                                         | 1862 |
| <i>Hui Xu</i>                                                                                                                                                                                                                                                  |      |
| (Invited) Degradation and Poisoning of Proton-Exchange Membrane Water Electrolyzer Anode Catalysts .....                                                                                                                                                       | 1863 |
| <i>Deborah J. Myers, Zhao Li, Xiaoping Wang, Ngoc K Dang, Nancy N. Kariuki</i>                                                                                                                                                                                 |      |
| Exploring Low Temperature Proton Exchange Membrane Water Electrolysis Anode Catalyst Degradation Under Cathode Backpressure Conditions .....                                                                                                                   | 1865 |
| <i>Samantha Medina, Shaun M Alia</i>                                                                                                                                                                                                                           |      |
| Exploring Degradation in PEM Water Electrolysis Cells Due to Metal Migration: Insights from X-Ray Fluorescence Analysis .....                                                                                                                                  | 1867 |
| <i>Alexander Rex, Leonardo Almeida De Campos, Torben Gottschalk, Steffen Czoska, Erisa Saraçi, Patrick Trinke, Boris Bensmann, Jan-Dierk Grunwaldt, Thomas Sheppard, Richard Hanke-Rauschenbach</i>                                                            |      |
| Influence of Different Operating Conditions on Iridium Dissolution in a Proton Exchange Membrane Water Electrolyzer .....                                                                                                                                      | 1869 |
| <i>Maja Milosevic, Leonard Winkelmann, Simon Thiele, Serhiy Cherevko</i>                                                                                                                                                                                       |      |
| Understanding Degradation Mechanisms in PEM Water Electrolysis Under Dynamic and Static Operating Conditions.....                                                                                                                                              | 1870 |
| <i>Elliot Padgett, Haoran Yu, Sarah J. Blair, Bryan S. Pivovar, Deborah J. Myers, David A. Cullen, Shaun M Alia</i>                                                                                                                                            |      |
| Understanding Mechanisms and Reversibility of Anode Degradation in PEM Water Electrolysis.....                                                                                                                                                                 | 1872 |
| <i>Sarah J. Blair, Shaun M Alia, Elliot Padgett</i>                                                                                                                                                                                                            |      |

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| (Invited) Electron Microscopy Investigation of PEM Electrolyzer Degradation at Low Iridium Loadings .....                                                                                        | 1873 |
| <i>Haoran Yu, David A. Cullen, Alexey Serov, Ai-Lin Chan, Elliot Padgett, Shaun M Alia, Chance Parrish, Scott A Mauger, Kui Li, Siddharth Komini Babu, Deborah J. Myers, Rangachary Mukundan</i> |      |
| Understanding in-Plane Movement of Iridium in Proton Exchange Membrane Electrolyzer after Accelerated Stress Test.....                                                                           | 1874 |
| <i>Nadia Ebrahimpour Tolouei, Florian Chabot, Gaohua Zhu, Iryna Zenyuk</i>                                                                                                                       |      |
| Investigating the Differences between the in-Situ Galvanostatic Test and Ex-Situ Fenton Test on Nafion Membranes for PEM Water Electrolysis .....                                                | 1876 |
| <i>Sudeshna Patra, Torben Gottschalk, Janis Heßling, Patrick Trinke, Felix Schweer, Florian Bittner, Monika Schönhoff, Boris Bensmann, Richard Hanke-Rauschenbach</i>                            |      |
| Understanding Performance Limitation of Liquid Alkaline Water Electrolyzers.....                                                                                                                 | 1877 |
| <i>Guanzhi Wang, Andrew W. Tricker, Rangachary Mukundan, Xiong Peng</i>                                                                                                                          |      |
| Investigation of Anion Exchange Membrane Water Electrolysis Efficiencies at Cell Level Using Online Mass Spectrometry .....                                                                      | 1878 |
| <i>Manuel Hegelheimer, Simon Thiele, Anna T. S. Freiberg</i>                                                                                                                                     |      |
| Investigating the Effects of Anode Catalyst Conductivity and Loading on Performance for Anion Exchange Membrane Water Electrolysis.....                                                          | 1880 |
| <i>Melissa E Kreider, Haoran Yu, Luigi Osmieri, Emily K. Volk, Piotr Zelenay, David A. Cullen, Shaun M Alia</i>                                                                                  |      |
| Evaluating the Impact of Cell Assembly and Operating Conditions on the Performance of Anion Exchange Membrane Electrolyzers .....                                                                | 1882 |
| <i>Mahmoud Amirsalehi, K Hari Gopi, Pongsarun Satjaritanun, Marta Moreno, Benjamin Britton, William Earl Mustain</i>                                                                             |      |
| Materials Integration and Catalyst Interfaces in Anion Exchange Membrane, Low Temperature Electrolysis .....                                                                                     | 1883 |
| <i>Shaun M Alia, Melissa E Kreider, Emily K. Volk, Ai-Lin Chan, Noor Ul Hassan, Arielle L Clauser, Josh D Sugar</i>                                                                              |      |
| Quantification of Hydrogen and Transition Metals in the Cathode Catalyst Layer of Anion Exchange Membrane Electrolyzer By Ion Beam Techniques .....                                              | 1885 |
| <i>Yamini Kumaran, Latika S. Chaudhary, Iulian Gherasoiu, Daniel Alejandro Moreno Jimenez, Kyoung-Yeol Kim, Yamini Kumaran</i>                                                                   |      |
| Revolution of Electrode Design Toward Oxygen Evolution Reaction for Anion Exchange Membrane Water Electrolysis.....                                                                              | 1886 |
| <i>Xiang Lyu, Alexey Serov</i>                                                                                                                                                                   |      |
| 3D-Printed Hierarchical Electrodes for Ampere-Level Alkaline Water Electrolysis.....                                                                                                             | 1887 |
| <i>Xiaodong Chen, Deli Zhou, Junhao Ding, Xu Song, Weihong Li</i>                                                                                                                                |      |
| Surface Engineered Ni-Fe Foam As a Bi-Functional Electrode for Water Electrolysis in Alkaline Media.....                                                                                         | 1889 |
| <i>Islam A Aly, Mohamed O Abdelsalam, Ehab N El Sawy</i>                                                                                                                                         |      |
| (Invited) Catalyst and Anode Design for Durable Alkaline-Membrane Electrolysis.....                                                                                                              | 1890 |
| <i>Shannon W. Boettcher</i>                                                                                                                                                                      |      |

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| Enhanced Dynamic Operational Stability of Ni-Based Electrodes for Alkaline Water Electrolysis .....                                                                                                   | 1891 |
| <i>Minjoong Kim, Hyunseok Cho, Changsoo Lee, Sechan Lee, Gisu Doo, Jongsu Seo, Hyeonjung Park</i>                                                                                                     |      |
| Nanocone-Modified Surface Facilitates Gas Bubble Detachment for High-Rate Alkaline Water Splitting .....                                                                                              | 1892 |
| <i>Qiu Ren, Longsheng Feng, Congwang Ye, Xinzhe Xue, Dun Lin, Sam Eisenberg, Tianyi Kou, Eric B Duoss, Cheng Zhu, Yat Li</i>                                                                          |      |
| Rational Comparison of Anode Material Properties for Anion Exchange Membrane Water Electrolysis .....                                                                                                 | 1893 |
| <i>Vineetha Vinayakumar, Doris Segets</i>                                                                                                                                                             |      |
| Low-Temperature Water Electrolysis Under a Sustained pH-Gradient for the Electrochemically-Induced Decarbonation of Limestone into Hydrated Lime .....                                                | 1895 |
| <i>Rémy Rouxhet, Renaud Delmelle, Joris Proost</i>                                                                                                                                                    |      |
| Investigating Water and Ion Transport in a Novel Cell Design for Seawater Electrolysis .....                                                                                                          | 1897 |
| <i>Mohammed Al Murisi, Masoomah Ghasemi, Rashad Ali, Xiaoxuan Yang, Yasmin Bimbatti, Jeffrey McCutcheon, Paul Kohl, Sirivatch Shimpalee, William Earl Mustain</i>                                     |      |
| Development of an Onboard Urea Electrolyser to Reduce NO <sub>x</sub> Emissions in Vehicles By Enhancing the Selective Catalytic Reduction with the Produced H <sub>2</sub> and NH <sub>3</sub> ..... | 1898 |
| <i>Jagoda Justyna Chmielarz, Tobias Morawietz, Manuel Häßner, Aldo Saul Gago, K. Andreas Friedrich</i>                                                                                                |      |
| Selectivity Study of Anodic Seawater Electrolysis Catalysts Using the Rotating Ring-Disc Electrode Method .....                                                                                       | 1900 |
| <i>Oliver Horner, Elod Lajos Gyenge, David P. Wilkinson</i>                                                                                                                                           |      |
| Optimal Design and Operation of Electrolytic Hydrogen Production and Storage System for Solar Photovoltaic Power Smoothing .....                                                                      | 1902 |
| <i>Yifan Wang, Paul Brooker, James M. Fenton</i>                                                                                                                                                      |      |
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