

Program for 2025 ICAC

Time	Day 1 – November 30 (Sunday)
13:00-16:00	Registration
16:00-16:20	Open Remarks
16:20-17:30	Session 1: Chair: Prof. Chi-Chang Hu
16:20-17:00	Plenary Speaker: Prof. Hirotomo Nishihara Title: 3D graphene materials for advanced capacitors
17:00-17:30	Keynote Speaker: Prof. Enn Lust Title: Development of high power and energy density supercapacitors
17:30-19:30	Welcome Reception

Time	Day 2 – December 01 (Monday)
08:40-10:10	Session 2: Chair: Prof. Jeng-Kuei Chang
08:40-09:20	Plenary Speaker: Dr. Jon Ajuria Title: From Interface Design to Prototyping: A Scalable Pre-Lithiation Strategy for Advanced Lithium-Ion Capacitors
09:20-09:50	Keynote Speaker: Prof. Katsuhiko Naoi Title: Back to Science, Forward to Innovation - toward Next-Generation Power Architectures
09:50-10:10	Invited Speaker: Dr. Yu-Liang Chen Title: High-Performance and High-Voltage Supercapacitors Based on Activated Carbon with Low Functional Group Derived from Mesocarbon Microbeads (MCMB)
10:10-10:30	Coffee Break
10:30-12:00	Session 3: Chair: Prof. Hirotomo Nishihara
10:30-10:50	Invited Speaker: Prof. Scott Donne Title: The Nature of the Electrified Interface
10:50-11:10	Invited Speaker: Prof. Daisuke Takimoto Title: High Capacitance and Durability of Molecular Solid Electrodes
11:10-11:30	Invited Speaker: Prof. Wan-Yu Tsai Title: Visualization of Ionic Liquid Electric Double Layer Structure by operando AFM
11:30-11:45	Oral Speaker: Dr. Yoshikiyo Hatakeyama Title: Operando Time-Resolved SAXS and Electrochemical Dilatometry of Electric Double-Layer Capacitor Electrodes
11:45-12:00	Oral Speaker: Ms. Yun Ku Title: Deciphering Self-Discharge Mechanisms in EDLCs: A Molecular-Level Perspective on Carbonate Additive Effects
12:00-14:20	Lunch
	Poster*50
14:20-15:50	Session 4: Chair: Dr. Dr. Jon Ajuria

14:20-14:40	Invited Speaker: Prof. Masashi Okubo Title: Pseudocapacitive MXenes for All-Solid-State Electrochemical Storage Devices
14:40-15:00	Invited Speaker: Dr. Cristian Jaimes-Paez Title: Electrochemical Expansion as a Versatile Route for 2D Materials: From Graphene to MXenes for Energy Applications
15:00-15:20	Invited Speaker: Prof. Masanobu Chiku Title: Hybrid Capacitor Using a Metal Aluminum Negative Electrode
15:20-15:35	Invited Speaker: Prof. Ching-Yuan Su Title: Selective Nitrogen Doping at Hole Edges of Holey Graphene: Enhancing Ionic Transport Mechanisms for High-Performance Supercapacitors
15:35-15:50	Oral Speaker: Dr. Narayanamoorthi Eswaran Title: Bimetallic Ni-Cu/NiO-Cu ₂ O Heterostructures on N-Doped Porous Carbon as Advanced Electrodes for Non-Aqueous Li/Na-Ion Capacitors
15:50-16:10	Coffee Break
16:10-18:00	Session 5: Chair: Prof. Andrea Balducci
16:10-16:30	Invited Speaker: Prof. Masayuki Morita Title: Research and Development of Zinc-based Hybrid Capacitors
16:30-16:50	Invited Speaker: Prof. Soorathep Kheawhom Title: Co-Designing Heterointerfaces and Electrolytes for Asymmetric Supercapacitors
16:50-17:10	Invited Speaker: Dr. Adam Slesinski Title: Aqueous iodide/iodine-based electrochemical capacitor of high energy and increased cycle life
17:10-17:30	Invited Speaker: Prof. Frederic Favier Title: Composite electrode materials from metal hyperaccumulating plants
17:30-17:45	Oral Speaker: Ms. Rene Mary Amirtha Suthie Jeyakumar Interface Engineering of Cu Current Collector with Mixed Electronic–Ionic Conductivity for Next-Generation Aqueous Zn-Ion Hybrid Supercapacitors
17:45-18:00	Oral Speaker: Mr. Zher Yu Yu Title: Systematic designs of single metal compounds synthesized using ammonia fluoride-based complex as structure directing agents for energy storage
18:30-21:30	IAB Meeting & Dinner

Time	Day 3 – December 02 (Tuesday)
08:40-10:10	Session 6: Chair: Prof. Soshi Shiraishi
08:40-09:20	Plenary Speaker: Prof. Jeng-Kuei Chang Title: Electrolyte Formulations and Prelithiated Electrode Design for High-Performance Activated-Carbon Supercapacitors
09:20-09:50	Keynote Speaker: Prof. Pooi See Lee Title: Rapid ions transfer driven electrochemical energy storage systems
09:50-10:10	Invited Speaker: Prof. Shinichi Komaba Title: Exploring Highly Concentrated Electrolytes for K-Ion Batteries and Capacitors
10:10-10:30	Coffee Break

10:30-12:00	Session 7: Chair: Prof. Thierry Brousse
10:30-10:50	Invited Speaker: Prof. Bruce Dunn Title: New Directions for Niobate Electrochemical Materials
10:50-11:10	Invited Speaker: Prof. Daniel Chua Title: Supercapacitors based on Carbon and Carbide based Nanomaterials
11:10-11:30	Invited Speaker: Prof. Masashi Ishikawa Title: High Capacitance Arising from Specific Anion Storage at Poorly Graphitized Carbon Cathodes
11:30-11:45	Oral Speaker: Mr. Chuang Kai Jie Title: Fast Fabrication of High-Performance Supercapacitor Electrodes Based on Two-Dimensional Trimetallic Zinc Manganese Cobalt Layered Double Hydroxide Nanosheets Derived from Metal-Organic Frameworks
11:45-12:00	Oral Speaker: Mr. Mohammad Saquib Title: First report of Bridgman-type crystal puller-assisted synthesis of polycrystalline SnTe/MWCNT for dual energy storage and sensing, integration of flexible microsupercapacitors and humidity sensors in one platform
12:00-13:30	Lunch
13:30-15:30	Session 8: Chair: Prof. Bruce Dunn
13:30-13:50	Young Scholar Speaker: Prof. Han-Yi Chen Title: Toward Durable and Multifunctional Zinc-Based Capacitors for Next-Generation Energy Storage Applications
13:50-14:10	Young Scholar Speaker: Prof. Yasuyuki Kondo Title: Electrochemical Properties of High-Voltage Aqueous Hybrid Capacitors
14:10-14:30	Young Scholar Speaker: Prof. Che-Ning Yeh Title: Facile Synthesis of MOF-derived NiMn Oxides/rGO Hybrid Architectures for Supercapacitor Electrodes
14:30-14:50	Young Scholar Speaker: Prof. Keisuke Muramatsu Title: Charge Storage Capability of Layered Ruthenates with Different Interlayer Hydration States
14:50-15:10	Young Scholar Speaker: Prof. Prasit Pattananuwat Title: Engineering Bismuth-Based Materials for Photo-Assisted Charge Storage in Supercapacitors
15:10-15:30	Young Scholar Speaker: Dr. Andrés Parejo-Tovar Title: Tracking of ion population changes in the electrical double-layer electrode of a lithium-ion capacitor while extending the polarization beyond its cathodic stability potential
15:30-15:50	Coffee Break
15:50-17:50	Session 9: Chair: Prof. Hiroki Habazaki
15:50-16:10	Young Scholar Speaker: Dr. Omar Gómez Rojas Title: Electrolyte-Driven Solid-Electrolyte Interphase (SEI) Evolution on Graphite Anodes Under Rapid Cycling
16:10-16:25	Oral Speaker: Dr. Cheng Jie Chng Title: Impact of electrochemical preconditioning of highly porous activated carbon cathode on Si-based Li-ion capacitors

16:25-16:40	Oral Speaker: Mr. Ching-Yu Hu Title: Electrolyte Engineering to Regulate Li ⁺ Solvation and Strengthen Interphases in Wide-Temperature Lithium-Ion Capacitors
16:40-17:10	Keynote Speaker: Prof. Lu-Yin Lin Title: Engineering Nanostructured Derivatives from Zeolitic Frameworks Using Novel Chemical Modulators for Electrochemical Energy Storage
17:10-17:50	Plenary Speaker: Prof. Andrea Balducci Title: Development of new methodologies to elucidate the influence of electrolyte in degradation processes occurring in electrochemical capacitors
18:30-21:30	Banquet

Time	Day 4 – December 03 (Wednesday)
08:40-10:10	Session 10: Chair: Prof. Chi-Hsien Huang
08:40-09:20	Plenary Speaker: Prof. Yoong Ahm Kim Title: Engineering Edge Structures in Porous Carbon: A Versatile Strategy for Optimizing Energy Storage Devices
09:20-09:50	Keynote Speaker: Prof. Krzysztof Fic Title: Intriguing Role of Electrolyte in Hybrid Capacitors
09:50-10:10	Invited Speaker: Prof. Hiroki Habazaki Title: Defect and Interface Engineering in Enhancing the Breakdown Voltage of PEDOT:PSS Solid Al Capacitors
10:10-10:30	Coffee Break
10:30-12:00	Session 11: Chair: Prof. Jarrn-Horng Lin
10:30-10:50	Invited Speaker: Prof. Thierry Brousse Title: How to optimized the electrochemical properties of vanadium nitride thin films for micro-supercapacitors?
10:50-11:10	Invited Speaker: Prof. Jeng-Yu Lin Title: Solvent-Free Synthesis of Zeolitic Imidazolate Framework-derived Carbon Composites for Micro-supercapacitors
11:10-11:30	Invited Speaker: Prof. Soshi Shiraishi Title: Seamless Activated Carbon Electrode ~Toward Further Enhancing Durability~
11:30-11:45	Oral Speaker: Dr. Selvakumar Muthu Title: Screen-Printed rGO–CNF Nanocomposite Inks Enabling Flexible Strain Sensors, Sensitive Paracetamol Detection, and High-Performance Microsupercapacitors
11:45-13:30	Lunch
13:30-15:00	Session 12: Chair: Prof. Jeng-Yu Lin
13:30-13:50	Invited Speaker: Prof. Olivier Crosnier Title: Tuning perovskite materials for high power energy storage
13:50-14:10	Invited Speaker: Prof. Jarrn-Horng Lin Title: Potential Route for CCU to Green Nanocarbons and Porous Carbons Used in Supercapacitors

14:10-14:25	Oral Speaker: Mr. Shun-Feng Kuan Title: Cobalt–Manganese Glycerate Derived Sulfides for Efficient Energy Storage in Supercapacitors
14:25-14:40	Oral Speaker: Dr. Gurumurthy Sangam Title: One-Dimensional Nickel Cobalt Bimetallic Oxide Nanostructures for High-Stability Supercapacitor Electrodes
14:40-15:00	Invited Speaker: Prof. Wataru Sugimoto Title: Strategic modification to increase the pseudocapacitance
15:00-15:30	Awards / Close Remarks (Prof. Wataru Sugimoto)