**Yücelen Hotel**
**Akyaka-Mugla**

**Final Program**

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| | **mESC-IS 2019 Program** |
| | **September 10th Tuesday 2019** |
| 14:00 - 20:00 | Registration |
| 18:00 - 20:00 | Welcome Reception |

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| | | **September 11th Wednesday 2019** |
| 08:30 - 17:30 | | Registration |
| 08:15 - 08:50 | | Hall A<br>Opening Adresses |
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| 08:50 - 09:30 | | Hall A<br>**Chair: Dag Nerous** |
| | | Organic-based aqueous flow batteries for massive electrical energy storage **Michael J Aziz** |
| 09:30 - 10:00 | | Aqueous Electrolyte Rechargeable Metal-ion Batteries **Rezan Demir Çakan** |
| 10:00 - 10:30 | | A Novel Air-Stable O3-Type Layered Oxide Cathode for Sodium-Ion Batteries **Şaban Patat** |
| 10:30 - 11:00 | | Coffee Break |

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| | | **September 11th Wednesday 2019** | | |
| | | Hall A<br>**Chair: M. Kadri Aydınol** | Hall B<br>**Chair: Mustafa Ürgen** | Hall C<br>**Chair: Bora Timurkutluk** |
| 11:00 - 11:20 | | Graphene and MWCNT based freestanding thin film NCA cathode electrodes **Hatice Gungor**, Deniz Kuruahmet, Esma Mert, Ecem Berberİ, Mustafa Mahmut Singil, Engin Alkan, Lutfullah Ozdogan, Mehmet Oğuz GÜler, Hatem Akbulut and Aslihan Guler | Self-standing Ni nanowire-based electrodes produced by template-assisted electrodeposition for super-capacitors applications **Nourhan Mohamed** and Mustafa Urgen | Proton conductivity in BCY10 in nominally dry reducing conditions **Francisco Loureiro**, Domingo Pérez-Coll, Vanessa Graça, Sergey Mikhalev, Alejandro Ribeiro, Adélio Mendes and Duncan Fagg |
| 11:20 - 11:40 | | Novel Zirconium based Active Material Synthesis and Performance as a Li-ion Battery Electrode **Cansu Savaş Uygur** and M. Kadri Aydinol | Carbon Nanoflake - Manganese Dioxide Nanocomposite Supercapacitor Electrodes **Alptekin Aydinli**, Gülhan Çakmak, Tayfur Öztürk and Hüsnü Emrah Ünalan | Influence of Processing Conditions on the Electrochemical Performance of Ni-YSZ Thin Film Anodes Prepared by Polymeric Precursor Deposition **Buse Bilbey**, Meltem Sezen, Cleva Ow-Yang and Aligül Büyükaksoy |
| 11:40 - 12:00 | | Thermal behaviors of lithium and hydrogen in LiCoO2 positive electrode and LATP electrolyte at charging process **Bun Tsuchiya**, Ryo Kato, Shunya Yamamoto and Katsumi Takahiro | Liquid Phase Exfoliated Graphene as a Sacrificial Template for the Synthesis of MnO2 Nanoparticles with Superior Capacitance **Neriman Sinan** and Ece Unur | Fabrication of dense yttria stabilized zirconia coatings and their evaluation as a solid oxide fuel cell electrolyte **Batuhan Bal** and Aligül Büyükaksoy |
| 12:00 - 12:20 | | Effect of Ni-Mn-Co Ratio on Structural and Electrochemical Properties of NMC Cathode Materials **Berke Piskin**, Cansu Savas Uygur and M. Kadri Aydınol | Development and Characterization of Activated Carbon / Transition Metal Phosphide Composites for Electrochemical Capacitors **Kadir Özgün Köse** and M. Kadri Aydınol | Effect of crystal orientation on the chemical stability of La0.6Sr0.4CoO3 **Fatih Pişkin**, Dongha Kim, Roland Bliem and Bilge Yildiz |

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| 12:20 - 14:00 | Lunch Break | | |
| | **September 11th Wednesday 2019** | | |
| | Hall A<br>**Chair: Michael J Aziz** | | |
| 14:00 - 14:30 | Hydrides as conversion-type anodes for Li-ion batteries, **Fermin Cuevas** | | |
| 14:30 - 15:00 | Electrochemical evaluation of Li1.3Al0.3Ti1.7(PO4)3 (LATP) electrolytes for solid state battery applications **Mehmet Oguz Guler**, Ozgur Cevher, Aslihan Guler, Deniz Nalci, Hatice Gungor, Mustafa Mahmut Singil, Engin Alkan, Lütfullah Özdoğan and Hatem Akbulut | | |
| 15:00 - 15:30 | Operando XPS for a direct monitoring of the chemical and electronic properties of the electrolyte-electrode interfaces in all-solid-state batteries **Mario El Kazzi** | | |
| 15:30 - 16:00 | Impedance and Noise Analyses of Non-rechargeable and Rechargeable Batteries **Burak Ülgüt** | | |
| 16:00 - 16:30 | Developing Strategies for Solid Electrolytes Towards All Solid State Batteries **Servet Turan** | | |
| 16:30 - 17:00 | Coffee Break | | |
| | Hall -A<br>**Chair: Şaban Patat** | Hall-B<br>**Chair: Mehmet Oğuz Güler** | Hall C<br>**Chair: Duncan Fagg** |
| 17:00 - 17:20 | Porous Si, Si/C and SiC thin films as the anodes for lithium ion microbatteries **Aliya Mukanova**, Assel Serikkazyeva, Arailym Nurpeissova, Sung-Soo Kim, Maksym Myronov and Zhumabay Bakenov | Hierarchical Hybrid Electrodes Based on Polyaniline Coated Manganese oxide/Graphene Embedded Carbon Fibers for High Performance Supercapacitors **Leila Haghighi Poudeh**, Fevzi Çakmak Cebeci, Yusuf Menceloğlu, Mehmet Yildiz and Burcu Saner Okan | The Development of LaSrCoO3 Thin Film Cathodes For Solid Oxid Fuel Cells **Sevim Erdol**, Meltem Sezen, Cleva Ow-Yang and Aligül Buyukaksoy |
| 17:20 - 17:40 | Mechanochemical Synthesis of SnS Anodes for Sodium Ion Batteries **Mehbare Dogrusoz** and Rezan Demir-Cakan | Yolk-shell Fe3O4@Carbon Nanostructures as Supercapacitor Electrode Materials **Neriman Sinan** and Ece Unur | Development of Multi Phase Cathodes for IT-SOFCs via Thermal Plasma **Havva Eda Aysal**, Dogancan Sari, Fatih Pişkin and Tayfur Ozturk |
| 17:40 - 18:00 | Nano-magnetite decorated graphene oxide aerogels for high-capacity and stability Li-ion battery anodes **Buse Bulut Köpüklü**, Adnan Taşdemir, Alp Duman, Selmiye Alkan Gürsel and Alp Yürüm | Contribution of polyaniline coating to the stability and performance of nickel hydroxide based supercapacitor electrodes **Berke Karaman**, Nourhan Mohamad, Burçak Avcı and Mustafa Ürgen | Characterization of porous membranes modified by plasma-induced grafting as interelectrode separators in alkaline water electrolysis cell **Ľubomír Staňo**, Michal Stano and Pavol Ďurina |
| 18:00 - 18:20 | Green synthesis of silicon nanoparticles for high energy Li-ion battery applications **Engin Alkan**, Mustafa Mahmut Singil, Aslihan Guler, Mehmet Oguz Guler and Hatem Akbulut | Optimization of Graphene Synthesis by Electrochemical Exfoliation of Graphite **Vahit Kurt** and M. Kadri Aydınol | Ni@Pt/C Two Layer PEM Fuel Cell Electrocatalyst Preparation via Magnetron Sputtering Method **Sonnur Kurtuluş** and Ayşe Bayrakçeken Yurtcan |

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| **September 12th Thursday 2019** | | | | |
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| 08:15 - 08:45 | | Hall A<br>**Chair: Andras Tompos** | | |
| | | Magnetically separable metal(0) Nanocatalysts for hydrogen generation from the hydrolysis of ammonia borane **Saim Özkar** | | |
| 08:45 - 09:15 | | Graphene-based technologies for energy applications, challenges and perspectives **Selmiye Alkan Gürsel** | | |
| 09:15 - 9:45 | | Synthesis and characterization of ferrocene-functionalized reduced graphene oxide nanostructure via click reaction as a supercapacitor electrode material **Bahadir Keskin**, Burak Erdemir | | |
| 9:45 - 10:15 | | Flexible Supercapacitor Electrodes with Silver Nanowire Networks **Emrah Ünalan** | | |
| 10:15 - 10:45 | | Recent Developments in Supercapacitor Material Research **Mustafa Ürgen** | | |
| 10:45 - 11:15 | | Coffee Break | | |
| | | Hall A<br>**Chair: Tugrul Cetinkaya** | Hall B<br>**Chair: Emrah Unalan** | Hall C<br>**Chair: Elena Carcadea** |
| 11:15 - 11:35 | | Synthesis of Electroactive Materials for Suspension based Flow Assisted Batteries **Bayram Yıldız**, Yasemin Aşkar and Simge Çınar | Green approach for highly efficient synthesis of N/S-doped porous bio-carbon and its supercapacitor electrode performance **Muslum Demir** and Osman Cem Altıncı | Synthesis of Platinum Nanocrystals in Cubic Shapes Supported on N-Doped Carbon as PEM Fuel Cell Catalyst **Ayşenur Öztürk** and Ayşe Bayrakçeken Yurtcan |
| 11:35 - 11:55 | | High Cyclability rGO/Pd/a-MnO2 Nanocomposite For Lithium-Air Battery Utilized As Air Breathing Cathode **Ahmed Waleed Majeed Al-Ogaili**, Hatem Akbulut and Tuğrul Çetinkaya | Linear and Nonlinear Electrochemical Impedance Spectroscopy Studies of Li\SOCl2 Primary Batteries **Mohammed Ahmed Zabara**, Can Bark Uzundal and Burak Ulgut | Development of Novel Hybrid Electrospun Membranes for PEM Fuel Cells Naeimeh Rajabalizadeh, Adnan Taşdemir, Alp Yürüm, Selmiye Alkan Gürsel and **Begüm Yarar Kaplan** |
| 11:55 - 12:15 | | Biosynthesized MnO2 Nanowires for Carbon-Free Air Breathing Cathode to Enhance Cyclability of Li-O2 Battery **Sara Pakseresht**, Mihrac Halebi, Hatem Akbulut and Tuğrul Çetinkaya | Continuous synthesis of graphite with tunable interlayer distance **Gülhan Çakmak** and Tayfur Ozturk | Nitrogen-doped Carbon Derived from ZIF-8 as Platinum Catalyst Support for PEM Fuel Cells **Mohamed Ali Mohamud** and Ayşe Bayrakçeken Yurtcan |
| 12:15 - 12:35 | | Enhance oxygen electrocatalysis activity and stability by optimizing electronic metal-support interaction between binary metal carbide and nitrogen doped carbon **Chao Lin** and Jung-Ho Lee | Synthesis of graphene aerogel by reducing graphene oxide suspension for energy storage systems **Sıdıka Yıldırım**, Deniz Kuruahmet, Hatice Güngör, Aslıhan Güler, Mehmet Oğuz Güler and Hatem Akbulut | The effect of flow field design on large scale PEM fuel cells **Elena Carcadea**, Mihai Varlam, Laurentiu Patularu, Dorin Schitea, Derek Ingham and Mohammed S. Ismail |

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| 12:35 - 14:45 | **Poster Session and Lunch** |
| | **Poster Session: Batteries & Supercapacitors** |
| | Cost of Ownership for Electric Vehicles of Different Types – the Comparative Analysis **Evgeny Buzoverov** and Andrey Zhuk |
| | Express diagnostics of chemical power sources using impedance spectroscopy on the example of lithium tionile – chloride elements Evgeny Shkolnikov, **Elena Petrenko**, Valentina Semenova and Daria Vervikishko |
| | Electrochemical Noise Measurements and Their Chemical Origins in Primary Li Batteries **Gözde Karaoğlu,** Can Berk Uzundal and Burak Ulgut |
| | Structural and Electrochemical Performance of Mo-Doped Li(Ni0.8-xCo0.15 Al0.05 )O2 Cathodes for Li-Ion Batteries **Cansu Savaş Uygur**, Berke Piskin and M. Kadri Aydinol |
| | Perspective Cathode Material for Li-ion Batteries Based on Spinel Type Compounds: LiMexNi0.5-x Mn1.5O4, where Me = Fe and x = 0.1 ÷ 0.4 **Eteri Kachibaia,** Rupi Imnadze and Tamar Paikidze |
| | Synthesis of cathode composite powders from methylcellulose matrix: Li2FeSiO4/C, Li2FeP2O7/C and LiFePO4/C **Miloš Milović,** Dragana Jugović, Miodrag Mitrić, Maja Kuzmanović, Milica Vujković and Dragan Uskoković |
| | Ni-Rich LiNixMnyCozO2 (x>0.6) Cathode Material Development for Li-Ion Battery via Sol-Gel Method **Mustafa Alp Yildirim** and M. Kadri Aydinol |
| | Synthesis and characterization of nanostructured LiMnO2 and Li2MnO3 prepared by different methods **Krum Banov** and Branimir Banov |
| | Synthesis methods influencing electrochemical characteristics of NMC 811 **Krum Banov** and Branimir Banov (88), page 58 |
| | Synthesis and characterization of NMF cathode active materials for Li-ion batteries **Nilay Harmancı**, Şilan Demir, Berke Pişkin, and Gülhan Çakmak |
| | Effect of structural and chemical properties of carbonaceous anode materials on electrochemical performance for lithium-ion batteries **Yağmur Güner,** Kamil Burak Dermenci and Servet Turan |
| | CeO2 based catalyst nanostructures for high capacity Li-air battery electrodes **Adnan Tasdemir,** Sezer Seçkin, Emre Biçer, Alp Yürüm and Selmiye Alkan Gürsel |
| | Electrochemical Characterization and Modeling of the Effect of Electrolyte-to-Sulfur Ratio on the Cell Resistance in Li-S Batteries **Aysegul Karakus** and Damla Eroglu |
| | A new concept in flow assisted energy storage: suspension electrode approach Bayram Yıldız, Yasemin Aşkar and **Simge Çınar** |
| | Research and development of high-performance carbon materials for electrochemical power sources Evgeny Shkolnikov, **Egor Novaev**, Evgeny Vasiliev, Svetlana Kochanova, Irina Lipatova, Daria Vervikishko, Andrey Gavriluk and Renat Khakimov |
| | Development of Carbon-Free Bio-Titanium Oxide Cathode Materials For Li-O2 Batteries **Mihrac Halebi,** Sara Pakseresht, Tugrul Cetinkaya and Hatem Akbulut |
| | MoS2 Based Free Standing Electrodes With Graphene Support for Li-Air Batteries **Busra Korkusuz,** Hatem Akbulut and Tugrul Cetinkaya |
| | NASICON-type Fe 3+ substituted LiZr2(PO4) with improved ionic conductivity as solid electrolyte **Semih Engun,** K. Burak Dermenci and Servet Turan |
| | Asymmetric high-capacitive pseudosupercapacitors: Synergetic effect of ZnO nanocrystals and graphene foam **Maryam Toufani** and Emre Erdem |
| | Supercapacitive properties of Cobalt Metal Organic Framework Decorated Nickel Sulfate Nanowires Directly Grown on Nickel Foam **Farzaneh Hekmat** and Husnu Emrah Unalan |

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| Wearable Supercapacitors Based on Hierarchical Nickel Tungsten Trioxide@Nickel Oxide **Farzaneh Hekmat**, Husnu Emrah Unalan and Yusuf Tutel |
| Investigation of Defect Structures by Electron Paramagnetic Resonance (EPR) Spectroscopy in Electrode Materials for Hybrid Supercapacitors **Sumaiyah Najib** and Emre Erdem |
| Fabrication of Conductive Electroactive Materials for Next-Generation Suspension Flow Batteries **Yasemin Aşkar**, Bayram Yıldız and Simge Çınar |
| Synthesis and Characterization of Composite Active Cathode Materials for Lithium-Ion Batteries **Erdem Erkin Erdoğan** and M. Kadri Aydınol |
| A Green Battery for Large Scale Energy Storage Applications Berfu Karlı and **M. Kadri Aydınol** |
| Electrochemical properties of novel O3-NaMn5/12Fe2/12Ni5/12 as a cathode material for sodium-ion batteries **Ayşe Şahin**, Nur Şaşmaz, Yusuf Taş, Şaban Patat and Tayfur Öztürk |
| Improving the performance of Sn based anodes for Na-ion batteries **Aylin Elçi**, Emren Nalbant Esentürk and Tayfur Öztürk |
| Topological analysis and large-scale computational screening for solid Li-ion superconductor candidates **Mert Övün** and M. Kadri Aydınol |
| Raman studies of lithiated Si thin films with various doping types **Assel Serikkazyyeva**, Aliya Mukanova, Arailym Nurpeissova and Zhumabay Bakenov |
| Fe deoped MnO2 positive electrode for rechargeable Zn-MnO2 Batteries **Yiğit Akbaş,** Necdet Özgür Darıcıoğlu and Tayfur Öztürk |

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| **Poster Session: : Fuel Cells and Electrolyzers** |
| Synthesis of Anode (NiO-ScSZ)-Electrolyte(ScSZ) Bilayer via Tape Casting for IT-SOFC **Fahrettin Kılıç,** Havva Eda Aysal and Tayfur Öztürk |
| Cu-doped La2NiO4+δ as Co- and Ca,Sr,Ba-free electrode materials for protonic ceramic fuel cells Artem Tarutin, Julia Lyagaeva, Andrey Farlenkov, Alexey Vylkov and **Dmitry Medvedev** |

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| **Poster Session: Hydrides for Energy storage and Conversion** |
| Hydrogen Storage Properties of Oxygen modified AB2 type Metal Hydride Alloy **Moegamat Wafeeq Davids**, Tayla Chire Martin, Mykhaylo Lototskyy, Roman Denys and Volodymyr Yartys |
| Influence of electrostatic field on the interaction of AB5-type alloy LaNi4.4Al0.3Fe0.3 with hydrogen **Ivan Romanov,** Vasily Borzenko, Alexey Eronin and Alexey Kazakov |
| Effect of Pyrophyllite and VO2(B) on hydrogen sorption properties of Mg17Al12 **Sandra Kurko,** Jelena Rmuš, Tijana Pantić, Ana Mraković, Andjela Mitrović, Jasmina Grbovic Novakovic and Sanja Milošević Govedarović |
| Hydrogen in Mg-V thin films: TOF-ERDA characterization Tijana Pantic, Bojana Paskas Mamula, Sanja Milosevic Govedarovic, Sandra Kurko, Jasmina Grbovic Novakovic and **Nikola Novakovic** |
| Microstructural features and hydrogen sorption behaviour of Mg-Ni eutectic alloy composites with graphene **Pavel Fursikov,** Adilya Fattakhova, Artem Arbuzov, Alexey Volodin, Valentin Fokin and Boris Tarasov |
| Metal hydride hydrogen storage systems for power-to-hydrogen technologies **Boris Tarasov**, Pavel Fursikov, Alexey Volodin, Artem Arbuzov, Volodymyr Yartys and Mykhaylo Lototskyy |
| Density dependence in hydrogen-storage characteristic of lithium-rich zirconium oxides **Bun Tsuchiya**, Shimpei Iwane, Tomoko Sugiyama, Hiroki Miyaoka, Takayuki Ichikawa and Yoshitsugu Kojima |
| Influence of carbon ion irradiation on structural properties of MoS2 **Jelena Rmuš,** Željko Mravik, Ana Mraković, Tijana Pantić, Sanja Milošević Govedarović, Jasmina Grbović Novaković and Sandra Kurko |

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| | Investigation of catalytic properties of MoS2-GO nanostructures for hydrogenation reactions of various functional organic groups **Alper Yildirim,** Oğuz Bayindir and Bahadır Keskin |
| | MoS2-GO nanostructures as efficient cocatalyst of Zinc Phthalocyanine for water splitting **Hiba Messaoudi,** Bahadir Keskin and Atıf Koca |
| | Development of Perovskite-Oxide based Composites for Hydrogen Production **Ömer Özcan** and Fatih Pişkin |
| | Nature of bonding in amidoborane molecular chains and solids **Nikola Novakovic,** Bojana Paskas Mamula and Igor Milanovic |
| | Development of Hydrogen Purification Membrane Based on Pd-Mn-Ag Ternary System **Mehmet Mert Köse**, Hilal Aybike Can, Fatih Pişkin and Tayfur Ozturk |

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| | | **September 12th Thursday 2019** |
| | | Hall A<br>**Chair: Selmiye Alkan Gürsel** |
| 14:45 - 15:15 | | CO tolerant Pt electrocatalysts for PEM fuel cells with enhanced stability against electrocorrosion **Andras Tompos** |
| 15:15 - 15:45 | | Fabrication of Protonic Ceramic Fuel Cells **Duncan Fagg** |
| 15:45 - 16:15 | | GDC Interlayer on the Performance of Anode Supported Solid Oxide Fuel Cell **Bora Timurkutluk** |
| 16:15 - 16:45 | | Coffee Break |

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| | | Hall A<br>**Chair: Saim Özkar** |
| 16:45 - 17:15 | | "Poly(vinylidene fluoride-co-hexafluoropropylene) based polymer gel electrolytes for all solid state lithium air batteries **Tugrul Cetinkaya** |
| 17:15 - 17:45 | | Modeling discharge Behaviour of Li-S Batteries **Damla Eroglu** |
| 17:45 - 18:15 | | Correlation between formation duration and electrochemically active PbO2 particle size **Hatice Gokdemir**, Mehmet Ali Gulgun, Cem Hakan Yılmaz, Cem Açıksarı and Muhsin Mazman |
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| | | **September 13th Friday 2019** | | |
| | | **Hall A**<br>**Chair: Semen Klyamkin** | | |
| 08:15 - 08:45 | | Adding oxygen and hydrogen gas to NiMH batteries extend cycle life and can be used for basic studies of reaction kinetics and hydrogen diffusion **Dag Noréus**, Yang Shen and Stina Starborg | | |
| 08:45 - 09:15 | | Effect of surface plasma activation on the Mg2Ni powder hydrogenation mechanism Matas Damonskis, Marius Urbonavicius, Sarunas Varnagiris and **Darius Milcius** | | |
| 09:15 - 9:45 | | Fuel cell power module for electric forklift with integrated metal hydride hydrogen storage system Mykhaylo Lototskyy**, Ivan Tolj**, Adrian Parsons, Yevgeniy Klochko, Irshad Khan, Edson Naylor, Maurice Shenker, Ali Brey, Sivakumar Pasupathi and Vladimir Linkov | | |
| 9:45 - 10:15 | | Combinatorial Development of Hydrogen Separation Membranes in Ternary Alloy System **Fatih Pişkin**, Mehmet Mert Köse, and Tayfur Öztürk | | |
| 10:15 - 10:45 | | Metal hydride - polymer composites: a novel approach to membrane hydrogen separation **Semen Klyamkin**, Ivan Savvotin, Peter Konik, Elena Berdonosova, Vladislav Zadorozhnyy and Mikhail Zadorozhnyy | | |
| 10:45 - 11:15 | | Coffee Break | | |
| | | **Hall A**<br>**Chair: Servet Turan** | **Hall B**<br>**Chair: Mehmet Suha Yazıcı** | **Hall C**<br>**Chair: Darius Milcius** |
| 11:15 - 11:35 | | Dynamic analysis of lithium and hydrogen migrations at Au/LiCoO2, LiCoO2/LATP, LATP/Pt interfaces in all-solid-state batteries with charging by elastic recoil detection technique **Bun Tsuchiya**, Taiki Usami, Shunya Yamamoto and Katsumi Takahiro | Cobalt Macrocycles as Pt-free PEM Catalyst **Mehmet Suha Yazici** and Sumeyye Dursun | Low-Co AB5 intermetallic compounds for electrochemical applications **Alexey Kazakov,** Dmitry Blinov and Alexey Volodin (50), page 114 |
| 11:35 - 11:55 | | The effect of binders different on LiFePO4/Li4Ti5O12 full cell lithium ion batteries **Lütfullah Özdoğan**, Deniz Kuruahmet, Cansu Kose, Aslihan Guler, Hatice Gungor Gungor, Mustafa Mahmut Singil, Engin Alkan, Mehmet Oguz Guler and Hatem Akbulut | Synthesis of Platinum Nanocrystals in Different Shapes Assisted by Various Reductant Concentration and Utilization as PEM Fuel Cell Catalyst **Ayşenur Öztürk** and Ayşe Bayrakçeken Yurtcan ( | Carbon/Metal Hydride and Carbon/Hydroxide composites for Ni-MH power sources **Aleksei Volodin**, Artem Sleptsov, Artem Arbuzov, Pavel Fursikov, Alexey Kazakov, Dmitry Blinov and Boris Tarasov (110), page 115 |
| 11:55 - 12:15 | | A Multielement Doping Effect on Li7La3Zr2O12 Solid Electrolytes by Using Waste Material **Kamil Burak Dermenci,** Ahmet Furkan Buluç and Servet Turan | Functionalized graphene as efficient electrocatalyst support material for oxygen reduction reaction in PEM fuel cells **Esaam Jamil**, Veera Sadhu and Selmiye Alkan Gürsel | Development of Low Cost Electrodes for NiMH Batteries **Necdet Özgür Darıcıoğlu**, Yiğit Akbaş and Tayfur Öztürk (5), page 116 |
| 12:15 - 12:35 | | Assembling all-solid-state Lithium-Sulfur batteries: Li3PS4@Li \| Li7P3S11 \| P4S16 system **Abdulkadir Kızılaslan** and Hatem Akbulut | CO Tolerant Pt/Ti0.8Mo0.2O2-C Electrocatalyst for Reformate-fed PEM Fuel Cell **Mehmet Suha Yazici**, Sumeyye Dursun, Irina Borbath and Andras Tompos | Improving Electrochemical Performance of Aqueous Electrolyte Zn-Cryptomelane MnO2 with Alginate Film Coated Paper Separator **Selin Sarıyer** and Rezan Demir-Çakan (108), page 117 |
| 12:35 - 14:00 | | Lunch Break | | |

| September 13th Friday 2019 | | | | |
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| | | Hall A<br>**Chair: Rezan Demir-Çakan** | Hall B<br>**Chair: Jasmina Grbovic Novakovic** | Hall C<br>**Chair: Mykhaylo Lototskyy** |
| 14:00 - 14:20 | | Hydrothermally Synthesized Metal Oxide Containing Carbonaceous Material and Its Utilization as Interlayer in Lithium-Sulfur Batteries **Tutku Mutlu**, Elif Ceylan Cengiz and Rezan Demir-Cakan | Enhancing Electrochemical Performance of PVDF-HFP Gel Polymer Electrolytes with Different Type of Ceramic Fillers **Mustafa Celik**, Mustafa Can, Tugrul Cetinkaya and Hatem Akbulut | Characteristics of hydrothermal oxidation of solid aluminum for hydrogen producing **Renat Hakimov**, Eugene Shkolnikov, Mihail Vlaskin, Andrei Zhuk, Alexander Dolzhenko, Andrei Gavrilyuk and Ilya Gaganov (25), page 126 |
| 14:20 - 14:40 | | SnO2/N-doped Carbon Anode Material for SIBs **Meral Aydın**, Emrah Demir, Burcu Ünal and Rezan Demir Çakan | Facile Synthesis of Nanorod CuO/ Graphene/ MWCNT Nanocomposites for Li-Ion Batteries **Deniz Kuruahmet**, Cansu Köse, Aslıhan Güler, Hatice Güngör, Mustafa Mahmut Singil, Engin Alkan, Lütfullah Özdoğan, Mehmet Oğuz Güler and Hatem Akbulut | Performance simulation of combined two-tank latent and thermochemical heat storage systems for high temperature waste heat recovery **Serge Nyallang Nyamsi** and Mykhaylo Lototskyy (93), page 127 |
| 14:40 - 15:00 | | Biomass derived hard carbons and their tin oxide composites as anode materials for sodium ion batteries **Emrah Demir**, Meral Aydin and Rezan Demir-Cakan | The design of a Lithium Ion Full Cell Employing Silicon Based Anode and NMC Based Cathode **Mahmud Tokur** and Hatem Akbulut | On-board metal hydride thermal energy storage for ICE start preheating **Vasilii Borzenko** and Alexey Kazakov (81), page 128 |
| 15:00 - 15:20 | | Fabrication, Phase Evolution, Microstructure and Electrochemical Performance of La0.8Sr0.2FeO3 – Ce0.8Sm0.2O2 Thin Film Air Electrodes for Solid Oxide Fuel Cells **Levent Goral**, Meltem Sezen, Cleva Ow-Yang and Aligül Büyükaksoy | MOF Derived NiO Nanoparticles as High Performance Anode Materials for Lithium Ion Batteries Sezer Seçkin **Adnan Taşdemir**, Emre Biçer, Selmiye Alkan Gürsel and Alp Yurum | Three Dimensional Stress Analysis of Anode Supported SOFC Synthetic Micro Structure Selahattin Çelik, **Tolga Altan** and Serkan Toros (32), page 129 |
| 15:20 - 15:40 | | Coffee Break | | |

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| | | Hall A<br>**Chair: Inci Eroğlu** |
| 15:40 - 16:10 | | Latest Trends and Challenges in the Development of Commercial PEM Fuel Cells **Hüseyin Devrim** |
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| 16:10 - 16:30 | | **Closing Session** |
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| 20:00 - 23:00 | | **Gala Dinner** |