

4. National Carbon Conference (UKK4), March 28-29, 2024 Sabancı Üniversitesi Gösteri Merkezi (SGM)

28 March 2024 – Morning session

Carbon Materials & Environmental Applications- **Dedicated to Prof. Yuda Yürüm**

Chair: Prof. Ferhat YARDIM

09.30-10.00	Opening: Prof. Selmiye Alkan Gürsel & Assoc. Prof. Alp Yürüm Prof. Yusuf Leblebici - President of Sabanci University Prof. Erkey Savaş - Dean of Faculty of Engineering and Natural Sciences, Sabanci University **Commemoration of Prof. Yuda Yürüm **
10.00-10.40 KEYNOTE	Importance of Carbon Materials for the Hydrogen Economy Prof. Can ERKEY – Koç University
10.40-11.00	Effectiveness of Sunflower Seed Husk Biochar for Carbon Dioxide Adsorption <u>Dilara ERYILMAZ^{1*}</u> , <u>Vildan AKER¹</u> , <u>Nezihe AYAS¹</u> ¹ Chemical Engineering Department, Eskisehir Technical University, Eskisehir, 26555
11.00-11.20	Characterization of Porous Carbons by Gas Sorption <u>Seda Giray ÖZEN^{1*}</u> ¹ Anton Paar Ölçüm Aletleri Tic. Ltd. Şti., İstanbul, 34750
11.20-11.40	Coffee break
11.40-12.00	Investigation of CO₂ Adsorption Performance of Spinel Oxide & Metal-Organic Structures <u>Dilara KÜÇÜKAY^{1*}</u> , <u>Alireza KHATAEE^{1,2}</u> , <u>Hasan Can OKUTAN¹</u> , <u>Alper SARIOĞLAN¹</u> ¹ Chemical Engineering Department, İstanbul Technical University, Synthetic Fuels and Chemicals Technology Center (SENTEK), İstanbul; ² Department of Applied Chemistry, Faculty of Chemistry, University of Tabriz, Iran
12.00-12.20	Hydrophobic/oleophilic Biocarbon Material as an Alternative Sorbent to Oil/Water Separation <u>Burcu KİREN¹</u> , <u>Yağmur Bengisu GÜNGÖR¹</u> , <u>Erkutay ŞENTÜRK¹</u> , <u>Meruyert NAZHİPKYZY²</u> , <u>Esin APAYDIN VAROL^{1*}</u> ¹ Eskisehir Technical University, Faculty of Engineering, Department of Chemical Engineering, Eskişehir, 26555, ² Al-Farabi Kazakh National University, Faculty of Chemistry and Chemical Technology, Almaty 050000, Kazakhstan
12.20-12.50 INVITED	Surface Chemistry of Carbon Nanomaterials Assoc. Prof. M. Kemal BAYAZIT – Sabancı University Nanotechnology Research and Application Center (SUNUM)
12.50-14.20	Lunch break + Carbon Society Meeting

28 March 2024 – Afternoon session

Composite Carbon Materials (Chair: Prof. Can ERKEY)

14.20-14.50 INVITED	Nano Engineered Interfaces for Carbon Fiber Reinforced Composites and 3D Printed Parts Prof. Mehmet Özgür SEYDİBEYOĞLU - İzmir Katip Çelebi University
14.50-15.10	Thermochemical Conversion of Expired Drug into Carbonaceous Material <u>Pınar ACAR BOZKURT^{1*}</u> , <u>Nurettin Mete KALELİ¹</u> , <u>Murat BÜYÜK²</u> ¹ Department of Chemistry, Ankara University, Faculty of Science, Ankara, 06100 ² SUNUM - Sabancı University Nanotechnology Research and Application Center, İstanbul, 34956
15.10-15.30	Synthesis of Carbon Quantum Dot from an Expired Drug <u>Nurettin Mete KALELİ¹</u> , <u>Pınar ACAR BOZKURT^{1*}</u> , <u>Makbule Buse YETKİN¹</u> , <u>Bedi Göktuğ YORULMAZ¹</u> ¹ Department of Chemistry, Ankara University, Faculty of Science, Ankara, 06100
15.30-16.45	Poster Session/Coffee break
16.45-17.15 INVITED	Towards a Greener Future: Sustainable Graphene Production and Advancements in Lightweight Thermoplastic Composites Assoc. Prof. Burcu SANER OKAN - Sabancı University Integrated Manufacturing Technologies Research and Application Center (SU-IMC)
17.15-18.30	Panel: Karbon Malzemeler, Karbon Teknolojileri ve Sürdürülebilirlik DOWAKSA, SOCAR, KORDSA Mustafa YILMAZ (Karbon Derneği Başkanı), Prof. Ferhat YARDIM (Karbon Derneği YK)

29 March 2024 – Morning session

Electrochemical Applications of Carbon (Chair: Assoc. Prof. Önder METİN)

9.50-10.00	Opening: Cevdet Alemdar- Sabancı Holding Industrials SBU President
10.00-10.40	Nanocarbon Materials for Electrochemical Energy Storage
KEYNOTE	Prof. Cengiz ÖZKAN – University of California, Riverside
10.40-11.00	Electrocharacterization and Development of a Novel Electrochemical Sensor for the Simultaneous Determination of Paracetamol and Ibuprofen <u>Şefika Büsra UZUNÇAM^{1*}</u> , Nilüfer KOÇYİĞİT ¹ , Melih Beşir ARVAS ² , Şule DİNÇ ZOR ³ ¹ Department of Basic Pharmaceutical Sciences, Biruni University, ² Department of Chemistry, Faculty of Science, Istanbul University ³ Department of Chemistry, Faculty of Art and Sciences, Yıldız Technical University
11.00-11.20	Metal-Organic Frameworks with Ethylenediamine Additives for Electrochemical Supercapacitors <u>Hilal YILDIRIM KALYON^{1*}</u> , Metin GENCTEN ¹ , Semih GORDUK ² , Yucei SAHİN ² ¹ Yıldız Teknik Üniversitesi, Metalurji ve Malzeme Mühendisliği Bölümü, 34220 İstanbul, Türkiye ² Yıldız Teknik Üniversitesi, Kimya Bölümü, 34220, İstanbul, Türkiye
11.20-11.40	Coffee break
11.40-12.10	Thienothiophene based Materials; Synthesis, Investigation of Their Properties and Energy based Applications
INVITED	Dr. Recep İŞÇİ – Istanbul Technical University
12.10-12.30	Nanoscale carbon-based unipolar thermoelectric junctions <u>Alhun AYDIN^{1,2*}</u> ¹ Faculty of Engineering and Natural Sciences, Sabancı University, 34956 Tuzla, İstanbul ² Department of Physics, Harvard University, Cambridge, Massachusetts 02138, USA
12.30-13.00	Additive-free 2D-material-based Inks for Printed Energy Storage and Conversion Systems
INVITED	Dr. Sina ABDOLHOSSEINZADEH - Swiss Federal Laboratories for Materials Science and Technology (EMPA)
13.00-14.00	Lunch break

29 March 2024 – Afternoon session

Energy Applications of Carbon (Chair: Assoc. Prof. Alp YÜRÜM)

14.00-14.30	Carbon-based Photocatalysts for Sustainable Chemical Conversions
INVITED	Assoc. Prof. Önder METİN – Koç University
14.30-14.50	Conversion of CO₂ into Alternative Fuels with Novel Catalysts <u>Aysel ZAHIDOVA¹</u> , Eser HAFIZOĞLU ¹ , Vahide MUTLU ¹ , Özgün DELİSMAİL ¹ , Başak TUNCER ¹ , Erol ŞEKER ² ¹ SOCAR Türkiye Research and Development A.Ş. Aliğa, Türkiye ² İzmir Yüksek Teknoloji Enstitüsü, Enerji Sistemleri Mühendisliği Bölümü, Türkiye
14.50-15.10	Novel Thermal Recovery of Recycled Graphite for Sustainable and Reliable Li-Ion Batteries Recep BAKAR ^{1*} , Ömer EROĞLU ^{2*} , Taha ULUHAN ³ , <u>Fatih BOSNA⁴</u> ^{1,2} Department of Cell R&D Engineering, Siro Silk Road Clean Energy Solutions, Gebze, Kocaeli 41400, Türkiye ^{3,4} Novocycle Technologies, Gebze, Kocaeli 41400, Türkiye
15.10-15.30	Coffee break
15.30-15.50	Electrospun Carbonized Iron Fiber Carbon Catalyst Layers to Enhance Performances of Hybrid Hydrogen-based Flow Batteries <u>Barun K. CHAKRABARTI^{1*}</u> , Mengzheng OUYANG ² , Billy WU ³ , Javier RUBIO-GARCIA ⁴ , Anthony KUCERNAK ⁴ , Nigel BRANDON ⁵ ¹ SUNUM; ² Department of Earth Science and Engineering, Imperial College London; ³ Dyson School of Design Engineering, Imperial College London, ⁴ Department of Chemistry, Imperial College London, ⁵ RFC Power Ltd., London
15.50-16.10	Hydrothermal Synthesis of Heteroatom-Doped Carbon Dots from European Alkaligrass <u>H. Enis KARAHAN^{1*}</u> , Yalçın HU ¹ , Riccardo PINOTTI ¹ , Yilin HE ¹ , Alberto BIANCO ^{1,*} ¹ CNRS, Immunology, Immunopathology & Therapeutic Chemistry (I2CT), ISIS, University of Strasbourg, France
16.10-16.40	Effect of Carbon Properties and Amount on The Lithium-Sulfur Battery Performance
INVITED	Assoc. Prof. Damla EROĞLU PALA – Boğaziçi University
16.40-17.15	Best Poster Award Session & Closure