Assoc. Prof. Burak Ulgut

Department of Chemistry, Bilkent University, Ankara, Turkey

EDUCATION

PhD	*Physical /Analytical Chemistry*	2007	**Cornell University, USA**
MSc	*Physical /Analytical Chemistry*	2004 (GPA: 3.82/4)	**Cornell University, USA**
BS	*Chemistry*	2002 (GPA: 3.43/4)	**Bilkent University, Turkey**

RESEARCH EXPERIENCE

9/2021-present	Associate Professor at Department of Chemistry, **Bilkent University**
9/2015-9/2021	Assistant Professor at Department of Chemistry, **Bilkent University**
6/2014-8/2015	R&D Executive at **Inci Aku San. Ve Tic. A.Ş.**
9/2008-5/2014	Instrumentation Scientist / Applications Manager at **Gamry Instruments, Inc**
9/2007-9/2008	Postdoc. Research Associate at **Cambridge University, Department of Physics**

AWARDS

- 2021 Bilkent University Distinguished Teacher Award
- 2020 Parlar Research Incentive Award from Parlar Foundation
- 2020 BAGEP Awardee from the Turkish Science Academy (Outstanding Young Researcher)
- 2019 GEBİP Awardee from Turkish Academy of Sciences (Outstanding Young Researcher)
- Bayer Excellence in Teaching Award, Cornell University (2003-2004).
- Awarded by a stipend by Technical and Scientific Research Council of Turkey (TUBITAK) during undergraduate study for ranking in the best 1000 students amongst ~1.5 million in the national university entrance examination (1998-2002).
- Full scholarship including tuition, housing and a monthly stipend awarded by Bilkent University for undergraduate study. (1998-2002).

PUBLICATIONS

56 Zabara MA; Goh JM; Gaudio VM; Zou L; Orazem ME; **Ulgut B** "Utility of Lissajous Plots for Electrochemical Impedance Spectroscopy Measurements: Detection of non-Linearity and non-Stationarity" Journal of the Electrochemical Society, *submitted*

55 Ulu I; **Ulgut B**; Dag O; "Nanoarchitectonics of Mesoporous M2P2O7 (M = Mn(II), Co(II), and Ni(II)) and M2–xCoxP2O7 and Transformation to Their Metal Hydroxides with Decent Charge Capacity in Alkali Media", Inorganic Chemistry, ASAP

54 Karaoglu G; Kutbay E, Ince S; **Ulgut B**; Suzer S; "Assessing Local Electrical Properties of Ionic Liquid/Metal Interfaces with Operando-XPS and by Incorporating Additional Circuit Elements" Analytical Chemistry, 2023, 95, 40, 14861–14869

53 Karaoğlu G; **Ulgut B**; "Battery chemistry prediction with short measurements and a decision tree algorithm: Sorting for a proper recycling process", Journal of Energy Storage, in press

52 Orazem ME; **Ulgut B**; "On the Drift Correction for Electrochemical Impedance Spectroscopy Measurements" Electrochimica Acta, 2023 (443) 141959

51 Topuzlu EY; **Ulgut B**; Dag O; "Lyotropic Liquid Crystalline Mesophases of Lithium Dihydrogen Phosphate and 10-Lauryl Ether Stabilized with Water or Phosphoric Acid" ChemPlusChem, 2023,88,e202200447

50 **Ulgut B** "Methods – Employing Multisine EIS for Batteries In Galvanostatic Mode" *Journal of the Electrochemical Society*, DOI:10.1149/1945-7111/ac9d05

49 Karaoglu G; Hatipoglu G; **Ulgut B**; "Electrochemical Noise Analysis in Batteries" *Electrochimica Acta*, 435 (2022) 141343

48 Chen C; Zhou J; Gong W; Fan X; Meng X; Chen S; Sun L; Meng Y; Tao K; **Ulgut B**; Sun P; Bielawski CW; Geng J; "Regulating the Solvation Structure of Potassium Ions Using a Multidentate Ether in Potassium Metal Batteries" *ACS Applied Energy Materials*, 2022, 5, 9, 10366–10374

47 Ye L; Zhang C; Zhou Y; **Ulgut B**; Zhao Y; Qian J; "Guided lithium nucleation and growth on lithiophilic tin-decorated copper substrate" *Journal of Energy Chemistry* 2022, 74,412-419

46 Zabara MA; Katırcı G; **Ulgut B**; "Non-linear Harmonics in EIS of Batteries with Lithium Anodes: Proper Controls and Analysis" *Electrochimica Acta* ,2022, 429, 140969

45 Zabara MA; Katırcı G; **Ulgut B**; "Operando Investigations of the Interfacial Electrochemical Kinetics of Metallic Lithium Anodes via Temperature-Dependent Electrochemical Impedance Spectroscopy" *Journal of Physical Chemistry C*, 2022, 126, 27, 10968–10976

44 Karatum O; Yildiz E; Kaleli HN; Sahin A; **Ulgut B** ; Nizamoglu S; "RuO2 Supercapacitor Enabled Flexible, Safe, and Efficient Optoelectronic Neural Interface" *Advanced Functional Materials*, 2022, 32, 2109365

43 Başaran M; Öz E; Ergöktaş S; Kocabaş C; **Ulgut B**; Kocabaş A; Suzer S; "Localized X-ray photoelectron impedance spectroscopy (LoXPIS) for capturing charge dynamics of an ionic liquid electrolyte within an energy storage device" *Faraday Discussions*, 2022 Advance Article

42 Katırcı G; Zabara MA; **Ulgut B** "Unexpected Effects in Galvanostatic EIS of Randles' Cells: Initial Transients and Harmonics Generated" *Journal of the Electrochemical Society* 2022,169, 030527

41 Topuzlu EY; Okur HI; **Ulgut B**; Dag O "Role of Water in the Lyotropic Liquid Crystalline Mesophase of Lithium Salts and Non-ionic Surfactants" *Langmuir*, 2021, 37, 49, 14443-14453

40 Zabara MA; Uzundal CB; **Ulgut B** "Performance modeling of unmanaged hybrid battery/supercapacitor energy storage systems" *Journal of Energy Storage*, 2021, 43, 103185

39. Topuzlu EY; **Ulgut B**; Dag O; "Role of Water in the Lyotropic Liquid Crystalline Lithium Iodide–Iodine–Water–C12E10 Mesophase as a Gel Electrolyte in a Dye-Sensitized Solar Cell" *Langmuir*, 2021, 37, 27, 8305-8313

38. Zabara, MA; Karabatak A; Göçmez H; **Ulgut B**; "Characterization of Different Electrolyte Composition Lithium Thionyl Chloride Reserve Battery by Electrochemical Impedance Spectroscopy", *Journal of the Electrochemical Society*, 2021, 168 ,050529

37. Karatum O; Aria M.M. ; Eren G.O.; Melikov R; Srivastava S B; Surme S; Yıldız E;, Dogru IB, Jalali HB; **Ulgut B**; Sahin A; Kavakli IH; Nizamoglu S; "Nanoengineering InP Quantum Dot-based Photoactive Biointerfaces for Optical Control of Neurons" *Frontiers in Neuroscience*, 2021,15:652608

36. Seok J; Zhang N; **Ulgut B**; Jin A; Yu S.-H.; Abruña, H.D. "Electrolyte screening studies for Li metal batteries", *Chemical Communications*, 2020,56, 11883-11886

35. Karaoğlu G; Uzundal CB; **Ulgut B**; "The Reason Behind the Increased Voltage Noise for Li MnO_2 Primary Batteries upon Shorting" *Journal of the Electrochemical Society* ,2020, 167, 130534

34. Melikov R; Srivastava SB; Karatum O; Dogru-Yuksel IB; Jalali HB; Sadeghi S; Dikbas UM; **Ulgut B**; Kavakli IH; Cetin AE; Nizamoglu S; "Plasmon-Coupled Photocapacitor Neuromodulators" *ACS Applied Materials and Interfaces*, 2020,12,32,35940-35949

33. Karakaya I; Karadas F; **Ulgut B**; Dag O; "Modification of Mesoporous LiMn2O4 and LiMn2−x Cox O4 by SILAR Method for Highly Efficient Water Oxidation Electrocatalysis" *Advanced Materials Technologies*, 2020, 2000353

32. Zabara MA; **Ulgut B**; "Electrochemical Impedance Spectroscopy based Voltage Modeling of Lithium Thionyl Chloride (Li\SOCl2) Primary Battery at Arbitrary Discharge" *Electrochimica Acta* 2020, Volume 334, 135584

31. You C; Zabara MA; Orazem ME; **Ulgut B**; "Application of the Kramers–Kronig Relations to Multi-Sine Electrochemical Impedance Measurements" *Journal of the Electrochemical Society* 2020,167, 020515

30. Uzundal CB; Sahin O; Aydogan Gokturk P; Wu H; Mugele F; **Ulgut B**; Suzer S; "X-Ray Photoelectron Spectroscopy with electrical modulation can be used to probe electrical properties of liquids and their interfaces at different stages" *Langmuir* 2019, 35(52), 16989-16999

29. Amirzhanova A; Karakaya I; Uzundal CB; Karaoğlu G; Karadas F; **Ulgut B**; Dag O, "Synthesis and water oxidation electrocatalytic and electrochromic behaviours of mesoporous nickel oxide thin film electrodes" *Journal of Materials Chemistry A*, 2019, 7 (38), 22012-22020

28. Zabara MA; Uzundal CB; **Ulgut B**; "Linear and Nonlinear Electrochemical Impedance Spectroscopy Studies of Li\$SOCl_2$" *Journal of the Electrochemical Society*, 2019, 166,A811-A820

27. **(Cover Feature)**Uzundal CB; Aydogan-Gokturk P; **Ulgut B**; Suzer S; "A Coarse-Grained Electrostatic Model Including Ion Pairing Equilibrium that Explains DC and AC XPS Measurements on Ionic Liquids" *Journal of Physical Chemistry C* 2019, 123, 13192-13200

26. Aydogan-Gokturk P; **Ulgut B**; Suzer S; "AC Electrowetting Modulation of Low Volatile Liquids Probed by XPS: Dipolar vs. Ionic Screening" *Langmuir* 2019, 35(9), 3319-3326

25. Camci MT; **Ulgut B**; Kocabas C; Suzer S; "XPS Investigation of the Vacuum Interface of an Ionic Liquid under Triangular Electrical Excitation for Slow Transients", *Analytical Methods* 2018,10(35), 4225-4228

24. Uzundal CB; **Ulgut B**; "A New Method for Voltage Noise Measurement and Its Application to Abused Primary Batteries" *Journal of the Electrochemical Society* 2018,165(11), A2557-A2562

23. Peterson BM; Ren D; Shen L; Wu Y.-C. M; **Ulgut B**; Coates GW; Abruña HD; Fors BP; "Phenothiazine-Based Polymer Cathode Materials with Ultra-High Power Batteries for Lithium Ion Batteries" A*CS Applied Energy Materials* 2018,1(8), 3560 - 3564

22. Aydogan-Gokturk P; **Ulgut B**; Suzer S; "DC Electrowetting of a nonaqueous liquid revisited by XPS", *Langmuir* 2018, 34 (25), pp 7301–7308

21. Balci FM; Karakaya I; Alsac EP; Yaman MY; Saat G; Karadas F; **Ulgut B**; Dag O; "Synthesis of Mesoporous $LiMn_2O_4$ and $LiMn_{2-x}Co_xO_4$ Thin Films Using MASA Approach as Efficient Water Oxidation Electrocatalysts" *Journal of Materials Chemistry A*, 2018, 6, 13925-13933

20. Uzundal C B; **Ulgut B**; "Visualization of Under-Coating Corrosion Metal Samples Utilizing pH Indicators before Visible Coating Damage", *Progress in Organic Coatings* 122C(2018), 72-78

19. Camci MT; **Ulgut B**; Kocabas C; Suzer S; "In-Situ XPS Reveals Voltage Driven Asymmetric Ion-Movement of an Ionic Liquid through the Pores of a Multi-Layer Graphene Electrode" *Journal of Physical Chemistry C*, 2018, 122 (22), pp 11883–11889

18. **Ulgut B**; "Analysis of electrochemical noise in NiCd batteries throughout their lifetime", *Turkish Journal of Chemistry*, 42, (2018), 859-868

17. Aydogan-Gokturk P; Donmez S E; **Ulgut B**; Turkmen Y E; Suzer S; "Optical and XPS Evidence(s) for the Electrochemically Generation of an N-Heterocyclic Carbene and its CS2 Adduct from the Ionic Liquid [bmim][PF6]" *New Journal of Chem.* 41(18), 10299-10304

16. Uzundal C B; Balci F M; **Ulgut B**; Dag O; "Lyotropic Liquid Crystalline Mesophase of Sulfuric Acid-Non-Ionic Surfactant Stabilizes Lead(II) Oxide in Sulfuric Acid Concentrations Relevant to Lead Acid Batteries" *ACS Omega* 2(7) 3785-3791

15. Uzundal C B; Ozdemir E; **Ulgut B**; "Analysis of Errors in Zero-Free-Parameter Modeling Approach to Predict the Voltage of Electrochemical Energy Storage systems under Arbitrary Load", *ECS Trans.* 77(11), 99-104

14. Ozdemir E; Uzundal C B; **Ulgut B**; "Zero-Free-Parameter Modeling Approach to Predict the Voltage of Batteries of Different Chemistries and Supercapacitors under Arbitrary Load" *Journal of the Electrochemical Society* 164(6), A1274-A1280 (2017)

13. Aydogan, P; Salzner U; Nyulaszi L; **Ulgut B**; Kocabas C; Suzer S; "XPS-evidence for in-situ electrochemically-generated carbene formation", *Electrochimica Acta* 234, 37-42 (2017)

12. Camci MT; **Ulgut B**; Kocabas C; Suzer S, "In-Situ XPS Monitoring and Characterization of Electrochemically Prepared Au Nanoparticles in an Ionic Liquid", *ACS Omega* 2 (2), 478-486 (2017)

11. Camci MT; Aydogan P; **Ulgut B**; Kocabas C; Suzer S; "XPS enables visualization of electrode potential screening in an ionic liquid medium with temporal- and lateral-resolution" *Physical Chemistry Chemical Physics* 18, 28434, (2016)

10. Guldin, S; Huettner, S; Tiwana, P; Orilall, C; **Ulgut, B**; Stefik, M; Kolle, M; Divitini, G; Ducati, C; Redfern, S; Snaith, H; Wiesner, U; Eder, D; Steiner, U; "Improved conductivity in dye-sensitised solar cells through block-copolymer confined TiO_2 crystallisation", *Energy and Environmental Science* 4(1), 225-233 (2011)

9. Huang, Y-S; Young, X; Schwartz, E; Lu, L P; Albert-Seifried, S; Finlayson, C; Koepf, M; Kitto, H; **Ulgut, B**; Otten, M; Cornelissen, J; Nolte, R; Rowan, A; Friend, R; "Sequential Energy and Electron Transfer in Polyisocyanopeptide-Based Multi-Chromophoric Arrays", *Journal of Physical Chemistry B* 115(7), 1590-1600 (2011)

8. Hindson J C, **Ulgut B**, Friend R H, Greenham N C, Norder B, Kotlewski A and Dingemans T J; "All-aromatic liquid crystal triphenylamine-based poly(azomethine)s as hole transport materials for opto-electronic applications" *Journal of Materials Chemistry*, (20), 937-944, (2010)

7. **Ulgut B,** Grose J E, Kiya Y, Ralph D C, and Abruña H D; "A New Interpretation of Electrochemical Impedance Spectroscopy to Measure Accurate Doping Levels for Conducting Polymers: Separating Faradaic and Capacitive Currents", *Applied Surface Science* 2009 , 256(5) , 1304-1308

6. Grose J E, Tam E S, Timm C, Scheloske M, **Ulgut B**, Parks J J, Abruña H D, Harneit W, Ralph D C; "Tunneling Spectra of Individual Magnetic Endofullerene Molecules", *Nature Materials* 7(11), 884-889

5. **Ulgut B**, and Abruña H D; "Electron Transfer through Molecules and Assemblies at Electrode Surfaces", *Chemical Reviews*, 2008, 108 (7), pp 2721–2736

4. Yuan M, **Ulgut B**, McGuire M, Takada K, DiSalvo F J, Lee S, and Abruña H D; "W_6S_8 Inorganic Clusters with Organic TTF Derivative Ligands: in Pursuit of Multidimensional Conductive Networks." *Chemistry Materials* 18(18), 4296-4306 (2006)

3. **Ulgut B**, Zhao Y, Grose J E, Ralph D C, and Abruña H D; "Electrochemical Properties of Self-Assembled Monolayers of Polyaniline: Effects of the Thiol Substituent and Reduced Dimensionality." *Langmuir* 22(9), 4433-4437 (2006)

2. Grose J E, Pasupathy A N, Ralph D C, **Ulgut B**, Abruña H D; "Transistor behavior via Au clusters etched from electrodes in an acidic gating solution: metal nanoparticles mimicking conducting polymers" , *Physical Review B* 71, 035306 (2005)

1. **Ulgut B**, Suzer S; "XPS studies of SiO_2/Si system under external bias", *Journal Physical Chemistry B* 107 (13), 2939-2943 (2003)

PRESENTATIONS

Conference Presentations:

- **(Plenary)** *Temperature Dependent Linear and Nonlinear EIS studies of Metallic Lithium Anodes* EIS2023, Bejing, PR China, July 3-7,2023
- **(Plenary)** *Impedance And Noise as Non-invasive Battery Analysis Tools* Mesc-IS 2023, Muğla Turkey, July 27-21, 2023
- *Electrochemical Noise Investigation in Non-Rechargeable Batteries* 243rd Meeting of the Electrochemical Society, May 29th- June 1st 2023 , Boston, USA
- *Physics-based Temperature Dependent EIS Simulation on 18650 NMC/Graphite Cell* 243rd Meeting of the Electrochemical Society, May 29th- June 1st 2023 , Boston, USA
- *Identifying Non-stationarity in Non-linear Harmonics of EIS Measurements* 243rd Meeting of the Electrochemical Society, May 29th- June 1st 2023 , Boston, USA
- *Impedance Based Modeling of Hybrid Energy Storage Systems,* Electrochem2019, Istanbul, Turkey
- **(Invited Keynote)***Impedance and Noise Analyses of Non-rechargeable and Rechargeable Batteries,* mESC-IS 2019, Akyaka, Muğla, Turkey
- **(Invited Keynote)***Basics of Electrochemical Impedance Spectroscopy*, 4th Biosensor Congress of Turkey, Çanakkale, Turkey
- *Modeling the Performance of Symmetric and Asymmetric Stacks Subject to Arbitrary Discharge,* Electrochemical Impedance Spectroscopy 2019, Lége-Cap-Ferret, France
- *Linear and Non-linear EIS Measurements on Li/SOCl2 Batteries,* 235th Meeting of the Electrochemical Society, Dallas, TX, USA May 26-30, 2019
- *Electrochemical Noise Measurements in Primary Lithium Batteries,* 235th Meeting of the Electrochemical Society, Dallas, TX, USA May 26-30, 2019
- *Şarj Edilebilen ve Edilemeyen Pil Sistemlerinde Empedans ve Gürültü Analizleri*, Pil Teknolojileri Çalıştayı, ASPİLSAN, December 21, 2018
- **(Invited)** *Primer Bataryalarda Doğrusal Olmayan Empedans ve Elektrokimyasal Gürültü Ölçümleri,* 9. Ulusal Analitik Kimya Kongresi, Konya, Türkiye, September 19-23, 2018
- *Modeling Kinetics of the Electrochemical Double Layer – A combined XPS Study*, 233rd meeting of the Electrochemical Society, Seattle, WA, USA May 13-17, 2018
- *Modeling Kinetics of the Electrochemical Double Layer – A combined XPS Study*, 8th Black Sea Basin Conference on Analytical Chemistry, Şile, Turkey, May 9-11, 2018
- *Modeling Kinetics of the Electrochemical Double Layer – A combined XPS Study*, Nano-TR13, Antalya, Turkey, October 23rd-25th 2017
- *Zero-Free-Parameter EIS Based Modeling of Battery Behavior*, mESC-IS 2017, Ortahisar, Turkey Sep 26th- Sep 28th 2017.
- *Zero-Free-Parameter EIS Based Modeling of Battery Behavior,* Ulusal Kimya Kongresi 2017,METU, Turkey, Sep 11th-Sep 14th 2017
- *In-situ X-Ray Photoelectron Spectroscopic Investigations during Electrochemical Experiments in Ionic Liquids*, 68th meeting of the International Society of Electrochemistry, Providence, RI, USA. Aug 28th – Sep 1st 2017.
- *Zero-Free-Parameter EIS Based Modeling of Battery Behavior*, 231st meeting of the ECS, New Orleans, LA, USA. May 28th- June 1st 2017
- *Empedans Tabanlı Pil Perfomans Modellemesi*, Invited to Aspilsan Şarj Edilebilir Pil Çalıştayı, December 17,2016

- *Fast EIS Monitoring to Follow Scratch Closing Corrosion*, Electrochemical Impedance Spectroscopy 2013, June 2013, Okinawa, Japan
- *Electrochemical Impedance Spectroscopy on Supercapacitors: Multisine EIS for Data Acquisition and Transmission Lines for Analysis,* 9th Electrochemistry Congress, September 25-29, 2011, Çeşme, Turkey
- *Electrochemical Impedance Spectroscopy and Application to Energy Storage and Conversion Devices,* 8th Electrochemistry Congress, October 8-11, 2010,Antalya, Turkey
- *Multisine EIS Measurements and Applications to Energy Systems,* Electrochemical Impedance Spectroscopy 2010, June 2010, Carvoeiro, Portugal

Seminars:

- (Online)*Impedance And Noise as Non-invasive Battery Analysis Tools* , Invited to Tsinghua University, Beijing, PR China
- *Impedance And Noise as Non-invasive Battery Analysis Tools* , Invited to Wuhan University, Wuhan, PR China
- *Impedance and Noise Analyses of Non-rechargeable and Rechargeable Batteries* , Invited to Middle East Technical University, November 2018
- *Impedance and Noise Analyses of Non-rechargeable and Rechargeable Batteries* , Invited to University of Florida, November 2018
- *Impedance and Noise Analyses of Non-rechargeable and Rechargeable Batteries* , Invited to Koç University, November 2018
- *Old Dogs, New Tricks: New Insights for Employing Impedance Spectroscopy, the Electrochemical Double Layer, and Lead Acid Batteries*, Invited to Sabancı University, December 2017
- *Old Dogs, New Tricks: New Insights for Employing Impedance Spectroscopy, the Electrochemical Double Layer, and Lead Acid Batteries*, Invited to Boğaziçi University, November 2017
- *Electrochemical Impedance Spectroscopy and Its Applications to Battery Analysis,* Invited to Cornell University, Department of Chemistry and Chemical Biology, in January, 2013.
- *Applying Electrical Potentials for Doing Chemistry: Controlling Surface Charging, Controlling Oxidation States, Measuring Properties of Embedded Interfaces,* Bilkent University, Symposium of Surface Science(in honor of 60th birthday of Prof. Süzer), March 21st , 2008
- *Size and Dimensionality Effects in Molecular Electron Transport*, Tokyo University, Department of Chemistry, August 24, 2005(Invited)

Workshops/Trainings Given:

- *Electrochemical Impedance Spectroscopy Training in Mesc-IS 2023 Summer School*
- *Electrochemical Impedance Spectroscopy Training in Mesc-IS 2021 Summer School*
- *Electrochemical Impedance Spectroscopy Training in Mesc-IS 2018 Summer School*
- *3. Elektrokimyasal Empedans Spektroskopisi Çalıştayı,* November 11, 2017
- *Temel Elektrokimyasal Empedans Spektroskopisi (EIS) Eğitimi*, May 17-18, 2014
- *Basic Electrochemistry Workshop,* Central Michigan University, February 2014.
- *Electrochemical Impedance Spectroscopy and Its Applications to Battery Analysis,* Webinar hosted by PlugVolt, November 7, 2012.
- *Temel Elektrokimyasal Empedans Spektroskopisi (EIS) Eğitimi*, April 21-22, 2012

Poster Presentations:

- *243rd Meeting of the Electrochemical Society, May 29th- June 1st 2023 , Boston ;* **Temperature-Dependent Electrochemical Impedance Spectroscopy (EIS) of Li/MnO2 Batteries**
- *Kraftwerk Batterie – Battery Power Europe;* **Electrochemical Noise Studies of Metallic Lithium Anodes** April 27-30 2023
- *Kraftwerk Batterie – Battery Power Europe;* **Electrochemical Noise Studies of Metallic Lithium Anodes** March 28-30 2022
- *69th Meeting of the International Society of Electrochemistry*: **Electrochemical Noise Studies of Primary Batteries** Sep 2nd – Sep 7th 2018.
- *69th Meeting of the International Society of Electrochemistry*: **Dynamics of the Double Layer in Ionic Liquids** Sep 2nd – Sep 7th 2018..
- *68th Meeting of the International Society of Electrochemistry*: **Zero-Free-Parameter EIS Based Modeling of Battery Behavior** Aug 28th – Sep 1st 2017.
- *67th Meeting of the International Society of Electrochemistry,* Poster title: **Noise Measurements on Battery Systems,** August 25-27,2016
- *Polymer Outreach Program 2006*, Cornell University, Poster title: "**Doping Levels of Conducting Polymers: Making the most out of impedance spectroscopy**" May 22-23, 2006
- *Electrochemistry,* Gordon Research Conference, Poster title: "**Doping Levels of Conducting Polymers: Impedance Spectroscopy Interpretation** ", February 12-17, 2006
- *Tokyo Summer School on Frontier Chemistry 2005*, Tokyo University, Poster title: "**Conducting Polymers: Effects of Size and Dimensionality on Nanoscale Conductivity**" August 25-28, 2005 (received Best Poster Award)
- *Electron Donor Acceptor Interactions*, Gordon Research Conference, Poster title: "**Dimensional Scaling for Molecular Electronics: Challenges in Correlating Bulk and Nanoscale Properties**" August 8-13, 2004

CONSULTS FOR

- ASPILSAN Energy – Fundamentals of Electrochemical Impedance Spectroscopy

Finished:

- VTT Finland Fundamentals of Electrochemistry
- AkzoNobel Kemipol (A manufacturer of anti-corrosion coatings) Electrochemical Impedance Spectroscopy of Paints&Coatings
- Ako AKÜ (A recently established Lead Acid Battery Company) Developing a method of correlating laboratory based simple electrochemical analyses with battery performance tests.
- Şişecam (A leading glass and glass products manufacturer) on Electrochemical Analyses of Electrochromic Devices

SPONSORED RESEARCH

Ongoing:

- Impedance Analysis of $LiSOCl_2$ batteries, sponsored by Vitzrocell, Inc., South Korea.

Finished:

- Ultrafast Spectroelectrochemistry for Understanding Electrochromism, sponsored by TÜBİTAK 1001
- "Electrochemical Noise Measurements on Batteries", sponsored by TÜBİTAK under 2232 program
- "Under-paint Corrosion Damage Detection", sponsored by Gamry Instruments, Inc.
- "Modeling Primary Batteries", sponsored by a company from defense industry (confidential).

REVIEWS FOR

Journal of Electroanalytical Chemistry (Elsevier) since June 2007
Electrochimica Acta (Elsevier) since December 2016
Spectrochimica Acta (Elsevier) since September 2016

Scientific Reports (Nature Publishing Group) since March 2017
International Journal of Energy Research (Wiley) since December 2017
Turkish Journal of Chemistry,(TÜBİTAK) since October 2018
Journal of The Electrochemical Society, (ECS) since December 2018
International Journal of Environmental Science and Technology(Springer) since March 2019
Corrosion Science (Elsevier) since March 2019
Materials Chemistry and Physics (Elsevier) since June 2020
Energy Storage Materials(Elsevier) since October 2020
Electrochemistry Communications(Elsevier) since October 2020
Applied Materials and Interfaces(ACS) since November 2020
ACS Applied Energy Materials since May 2022
Journal of Energy Storage since October 2023

MEETINGS ORGANIZED

- Organized the Energy Materials Symposium of IMMC2022 : Invited Speaker: Prof. M. Winter(Universität Münster)
- Has been organizing Elektrokimya Söyleşleri (www.elektrokimya.org). A biweekly online gathering that gathers together prominent electrochemists and students all across Turkey.
- Chaired Electrochem2019, September 30th-October 2nd 2019, Istanbul Turkey, Sponsored by the Executive Committee of the ISE Invited Speakers: Prof. H. D. Abruña (Cornell University), Prof. D. Scherson(Case Western Reserve University), Prof. P. Unwin(Warwick University), Prof. A. West(Columbia University), Prof. B. Yildiz(MIT)
- Was in the organizing committee for Nanotr 13, October 23rd-25th 2017, Antalya, Turkey

MEMBERSHIP

- Turkish Representative for the International Society of Electrochemistry since January 2020
- Member of International Society of Electrochemistry 2015-present
- Member of the Electrochemical Society 2015-present
- Member of the American Chemical Society 2019-present