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SCIENTIFIC BACKGROUND:

2020 - ***Bilkent University, Ankara, Turkey.*** Professor of Chemistry, Department of Chemistry

2015 - 2020 ***Bilkent University, Ankara, Turkey.*** Associate Professor of Chemistry, Department of Chemistry

2006 - 2015 ***Bilkent University, Ankara, Turkey.*** Assistant Professor of Chemistry, Department of Chemistry

2004 - 2006 ***Pacific Northwest National Laboratory, WA, USA,*** Post-Doctoral Research Scientist
Institute for Interfacial Catalysis (*iiC*), http://iic.pnl.gov/
Environmental and Molecular Sciences Laboratory (EMSL)

1999 - 2004 ***Texas A&M University, TX, USA,*** http://www.chem.tamu.edu , Ph.D. in Chemistry

Thesis: *Polarization Modulation Infrared Reflection Absorption Spectroscopy for Heterogeneous Catalytic Applications at Elevated Pressures*.

Advisor: ***Prof. D. Wayne Goodman***

1995 - 1999 ***Bilkent University, Ankara, Turkey.*** Bachelor of Science (Summa cum laude), Department of Chemistry

ACHIEVEMENTS, AWARDS, ORGANIZATIONAL DUTIES:

2022 **Sedat Simavi Foundation Science Award**
2022 **Bilkent University Executive Board Member**
2021 **Chairman, Chemistry Department, Bilkent University**
2020 **Turkish Accelerator and Radiation Laboratory in Ankara (TARLA) Executive Board Member**
2018 **Synchrotron-Light for Experimental Science and Applications in the Middle East (SESAME) Scientific Advisory Committee Member**
2016 **Science Academy Young Scientist (BAGEP) Award**
2014 **TUBITAK Research Incentive Award (TÜBİTAK Teşvik Ödülü), The Scientific and Technical Research Council of Turkey**
2014 **Distinguished Lecturer Award, Bilkent University**
2014 **Defense Industry Special Prize, SASAD Defense & Aerospace Industry Manufacturers Association**
2013 **FABED Eser Tumen Scientific Achievement Award**
2012 **METU Parlar Foundation Research Prize**
2010 **Outstanding Young Scientist Prize, Turkish Academy of Sciences,** "TUBA-GEBIP"
2006 **TUBITAK "CAREER Program" Grant,** The Scientific and Technical Research Council of Turkey.
2004 **Morton M. Traum Award**, American Vacuum Society, Anahiem, CA.
2004 **Chair's Award**, Gordon Research Conference on Catalysis 2004, New London, NH.
2004 **Celanese Chemicals Outstanding Graduate Student Award**, College Station, TX.
2003 **American Vacuum Society (AVS) Graduate Research Award**, Baltimore, MD.
2003 **Richard J. Kokes Award**, North American Catalysis Society (NACS), Cancun, Mexico.
2003 **Sharon Dabney Memorial Award**, Texas A&M University, College Station, TX.
2003 **Texas Surface Science Round-Up 2003, Best Oral Presentation Award**, Roundtop, TX.
2003 **Industry-University Cooperative Chemistry Program (IUCCP) 2003, Oral Presentation Award**, Texas A&M University, College Station, TX.
2002 **224th ACS National Meeting, Division of Colloid and Surface Chemistry, Poster Presentation Award**, Boston, Massachusetts.
1999 **TUBITAK Scientific Travel Grant**, The Scientific and Technical Research Council of Turkey (TUBITAK), Ankara, Turkey.
1995-1999 **Bilkent University Undergraduate Educational Fellowship**, Bilkent University, Ankara, Turkey.
1995-1997 **Undergraduate Scholarship for the Education of Young Scientists**, The Scientific and Technical Research Council of Turkey (TUBITAK), Ankara, Turkey.

SERVICES FOR SCIENTIFIC JOURNALS :

1. **2013-present** **CATALYSIS LETTERS (Springer Nature):** Scientific Advisory Board Member
2. **2013-present** **TOPICS IN CATALYSIS (Springer Nature):** Scientific Advisory Board Member
3. **2019-present** **TURKISH JOURNAL OF CHEMISTRY (TUBITAK Publications):** Editorial Board Member
4. **2022-present** **SURFACE SCIENCE and TECHNOLOGY (Springer Nature):** Editorial Board Member

ACADEMIC PUBLICATIONS:

Number of SCI Publications: 73, Number of SCI Citations: 2009, h-index: 28

1. *"Isocyanate Formation in the Catalytic Reaction of CO+NO on Pd(111): An in situ Infrared Spectroscopic Study at elevated Pressures"*
Ozensoy, E.; Hess, Ch.; Goodman, D. W.
***J. Am. Chem. Soc.,* 2002** (124) 8524

2. *"Polarization Modulation Infrared Reflection Absorption Spectroscopy at elevated Pressures: CO adsorption on Pd(111) at atmospheric pressures"*
Ozensoy, E.; Meier D. C.; Goodman, D. W.
***J. Phys. Chem. B,* 2002** (106) 9367

3. *"A combined in situ infrared and kinetic study of the catalytic CO+NO reaction on Pd(111) at pressures up to 240 mbar "*
Hess, Ch.; **Ozensoy, E.**; Goodman, D. W.
***J. Phys. Chem. B,* 2003** (107) 2759.

4. *"CO Dissociation at Elevated Pressures on Supported Pd Nano-clusters"*
Ozensoy, E.; Min, B. K.; Goodman, D. W.
***J. Phys. Chem. B*. 2004** (108) 4351.

5. *"Understanding the catalytic converison of automobile exhaust emissions using model catalysts: CO + NO reaction on Pd (111)"*
Ozensoy, E.; Hess, C; Goodman, D. W.
***Topics in Catalysis,* 2004** (28) 13.

6. *"Vibrational spectroscopic studies of CO/NO adsorption and reaction on Pd model catalysts"*
Ozensoy, E. and Goodman, D. W.
***Phys. Chem. Chem. Phys., COVER ARTICLE,* 2004** (6) 3765.

7. *"Reply to:Comment on 'Combined in Situ and Infrared Kinetic Study of the Catalytic CO + NO Reaction on Pd(111) at Pressures up to 240 mbar"*
Hess, C.; **Ozensoy, E.** and Goodman, D. W.
***J. Phys. Chem. B* 2004 (**108) 14181.

8. "*Electronic and vibtational properties of ultrathin SiO_2 films grown on Mo (112)"*
Wendt, S.; **Ozensoy, E.;** Frerichs, M.; Cai, Y.; Chen, M.-S.; Goodman D. W.
***Phys. Rev. B* 2005** (72) 115409.

9. "Interaction of water with ordered Al_2O_3 ultra thin films grown on NiAl(100)"
Ozensoy, E.; Szanyi, J.; Peden, C. H. F.;
***J. Phys. Chem. B* 2005** (109) 3431.

10. "*Formation of a high coverage (3x3)-7NO adsorption state on Pd (111) at elevated pressures: Interplay between kinetic and thermodynamic accessibility "*
Ozensoy, E.; Hess, C.; Goodman, D. W.; Loffreda, D.; Sautet, P.
***J. Phys. Chem. B* 2005** (109) 5414.

11. *"NO_2 Adsorption on ultrathin θ-Al_2O_3 films: Formation of Nitrate and Nitrite Species*"
Ozensoy, E.; Szanyi, J.; Peden, C. H. F.;
***J. Phys. Chem. B* 2005,** (109) 15977.

12. *"NO dimer and dinitrosyl formation on Pd(111): From UHV to elevated pressure conditions"*
Hess, C.; **Ozensoy, E.**; Yi, C. W.; Goodman, D. W.,
***J. Am. Chem. Soc.* 2006** (128) 2988.

ACADEMIC PUBLICATIONS (Continued):

13. *"Low temperature H_2O and NO_2 Coadsorption and Reaction on ultrathin θ-Al_2O_3 films"*
Ozensoy, E.; Szanyi, J.; Peden, C. H. F.;
***J. Phys. Chem. B* 2006**, (110) 8025 .

14. *"Ba Deposition and Oxidation on θ-Al_2O_3/NiAl(100) ultrathin films. Part I: Anaerobic Deposition Conditions"*
Ozensoy, E.; Peden, C. H. F.; Szanyi, J.;
***J. Phys. Chem. B,* 2006,** (110) 17001.

15. *"Ba Deposition and Oxidation on θ-Al_2O_3/NiAl(100) ultrathin films. Part II: O_2(g) Assisted Ba Oxidation "*
Ozensoy, E.; Peden, C. H. F.; Szanyi, J.;
***J. Phys. Chem. B,* 2006,** (110) 17009.

16. *"Model NO_x Storage Systems: Storage Capacity and Thermal Aging of BaO/θ-Al_2O_3/NiAl(100)"*
Ozensoy, E.; Peden, C. H. F.; Szanyi, J.;
***J. Catal*., 2006,** (243) 149.

17. *"NOx Reduction on a Transition Metal-free γ-Al_2O_3 Catalyst Using Dimethylether (DME)"*
Ozensoy, E.; Herrling, D.; Szanyi, J.;
***Catal. Today*, 2008**, (136) 46.

18. "The effect of impregnation strategy on methane dry reforming activity of Ce promoted Pt/ZrO2"
Ozkara-Aydinoglu, S.; **Ozensoy, E.**; Aksoylu, E. A,.
***Int. J. of Hydrogen Energy,* 2009** (34) 9711 .

19. *"Nature of the Ti-Ba interactions on the BaO/TiO_2/Al_2O_3 NO_x Storage System"*
Andonova, S. M.; Şentürk, G. S., Kayhan, E.; **Ozensoy, E.*** ,
***J. Phys. Chem. C,* 2009,** (113) 11014.

20. *"Fe Promoted NOx Storage Materials: Structural Properties and NOx Uptake"*
Kayhan, E.; Andonova, S. M.; Şentürk, G. S., Chusuei, C. C.; **Ozensoy, E*.**
***J. Phys. Chem. C,* 2010** (114) 1, 357.

21. *"Fine-tuning the Dispersion and the Mobility of BaO Domains on NO_x Storage Materials via TiO_2 Anchoring Sites"*
Andonova, S. M.; Şentürk, G. S., Kayhan, E.; **Ozensoy, E*.**
J. Phys. Chem. C,* 2010** (114) 40, 17003 ***(Invited Article)

22. *"Direct Evidence for the Instability and Deactivation of Mixed-Oxide Systems: Influence of Surface Segregation and Subsurface Diffusion"*
Emmez, E.; Vovk, E. I.; Bukhtiyarov, V. I.; **Ozensoy, E*.**
***J. Phys. Chem. C,* 2011** (115) 22438.

23. *"Role of the Exposed Pt Active Sites and BaO_2 Formation in NO_x Storage Reduction Systems: A Model Catalyst Study on BaO_x/Pt(111)"*
Vovk, E. I.; Emmez, E.; Erbudak, M.; Bukhtiyarov, V. I.; **Ozensoy, E*.**
***J. Phys. Chem. C,* 2011** (115) 24256.

24. *"SO_x Uptake and Release Properties of TiO_2/Al_2O_3 and BaO/TiO_2/Al_2O_3 Mixed Oxide Systems as NO_x Storage Materials"*
Şentürk, G. S.; Vovk, E. I.; Zaikovskii, V. I.; Say, Z.; Soylu, A. M.; Bukhtiyarov, V. I.; **Ozensoy, E*.**
***Catal. Today,* 2012** (184) 54.

25. *"First-principles investigation of NO_x and SO_x adsorption on anatase-supported BaO and Pt overlayers"*
Hummatov, R.; Toffoli, D.; Gülseren, O.; **Ozensoy, E.**; Üstünel, H.
***J. Phys. Chem. C*, 2012**, (116) 6191.

26. *"Enhanced Sulfur Tolerance of Ceria-Promoted NOx Storage Reduction (NSR) Catalysts: Sulfur Uptake, Thermal Regeneration and Reduction with H_2(g)"*
Say, Z.; Vovk, V.I.; Bukhtiyarov, V.I.; **Ozensoy, E*.**
***Topics in Catalysis,* 2013** (56) 950.

ACADEMIC PUBLICATIONS (Continued):

27. *"Interactive Surface Chemistry of CO2 and NO2 on Metal Oxide Surfaces: Competition for Catalytic Adsorption Sites and Reactivity"*
Vovk, E.I.; Turksoy, A.; Bukhtiyarov, V.I.; **Ozensoy, E*.**
J. Phys. Chem. C, **2013** (117) 7713.

28. *"Influence of Ceria on the NOx Reduction Performance of NOx Storage Reduction (NSR) Catalysts"*
Say, Z.; Vovk, E.I.; .; Bukhtiyarov, V.I.; **Ozensoy, E*.**
Applied Catalysis B, **2013** (142-143) 89.

29. *"In-situ Vibrational Spectroscopic Studies on Model Catalyst Surfaces at Elevated Pressures"*
Ozensoy, E.*; Vovk, E.I.
Topics in Catalysis (Invited Article), **2013** (56) 15, 1569.

30. *"Chemical deactivation by phosphorous under lean hydrothermal conditions over Cu/BEA NH_3 - SCR catalysts"*
Andonova, S.M.; Vovk, E. I.İ; Sjöblom, J.; **Ozensoy, E.,** Olsson L
Applied Catal. B, **2014** (147) 251.

31. *"Palladium doped Perovskite-Based NO Oxidation Catalysts: The Role of Pd and B-sites for NOx Adsorption Behavior via in-situ Spectroscopy"*
Say, Z.; Dogac, M.; Vovk, E.I.; Kalay, :E.; Kim, C. H.; Li, W..; Kalay, E.; **Ozensoy, E*.**
Applied Catal. B, **2014** (154–155) 51–61.

32. *"NOx Storage and Reduction Pathways on Zirconia and Titania Functionalized Binary and Ternary Oxides as NOx Storage and Reduction (NSR) Systems"*
Say, Z.; Tohumeken, M.; **Ozensoy, E*.**
Catal. Today, **2014** (231) 135–144 .

33. *"Thermal evolution of structure and photocatalytic activity in polymer microsphere templated TiO2 microbowls"*
Erdogan, D. A.; Polat, M.; Garifullin, R.; Guler, M. O.; **Ozensoy, E*.**
Applied Surf. Sci. **2014** (308) 50-57

34. *"TiO_2-Al_2O_3 Binary Mixed Oxide Surfaces for Photocatalytic NO_x Abatement"*
Soylu, A. M.; Polat, M.; Erdogan, D. A.; Yildirim, C.; Birer, O.; **Ozensoy, E*.**
Applied Surf. Sci., **2014** (318) 142-149

35. *"An XPS study of the interaction of model Ba/TiO_2 AND Ba/ZrO_2 NSR catalysts with NO_2"*
Smirnov, M. Y.;Kalinkin, A. V.; Nazimov, D. A,; Bukhtiyarov, V. I.; Vovk, E. I.; **Ozensoy, E*.**
J. Struc. Chem. **2014** (55) 757-763

36. *"Influence of the Sol-Gel Synthesis Protocol On the Photocatalytic Activity of TiO2-Al2O3 Binary Mixed Oxide Catalysts"*
Soylu, A. M.; Polat, M.; Erdogan, D. A.; Erguven, H.; **Ozensoy, E*.**
Catal. Today, **2015** (241) 25-32

37. "*NaCl-Promoted CuO-RuO2/SiO2 Catalysts for Propylene Epoxidation with O2 at Atmospheric Pressures: A Combinatorial Micro-reactor Study"*
Kalyoncu, S.; Duzenli, D.; Onal, I.; Seubsai, A.; Noon, D.; Senkan, S.; Say, Z.; Vovk, V.I.; **Ozensoy, E*.**
Catalysis Letters **2015** (145) 596-905

38. *"Acetaldehyde Partial Oxidation on the Au(111) Model Catalyst Surface: C-C bond Activation and Formation of Methyl Acetate as an Oxidative Coupling Product"*
Karatok, M.; Vovk, E.I.; Shah, A.; Turksoy, A.; **Ozensoy, E*.**
Surface Science **2015** (641) 289.

ACADEMIC PUBLICATIONS (Continued):

39. *"A Versatile Bio-inspired Material Platform for Catalytic Applications: Micron-Sized "Buckyball-Shaped" TiO_2 Structures"*
Erdogan, D. A.; Solouki, T.; **Ozensoy, E*.**
***RSC Advances* 2015** (5) 41174.

40. "*MnOx-Promoted PdAg Alloy Nanoparticles for the Additive-Free Dehydrogenation of Formic Acid at Room Tempreature"*
Bulut, A.; Yurderi, M.; Karatas, Y.; Say, Z.; Kivrak, H.; Kaya, M.; Gulcan, M.; **Ozensoy, E.**; Zahmakiran, M.
***ACS Catalysis,* 2015** 5 (10) 6099.

41. "*Spectroscopic Investigation of Sulfur-Resistant $Pt/K_2O/ZrO_2/TiO_2/Al_2O_3$ NSR/LNT Catalysts"*
Say, Z.; Tohumeken, M; **Ozensoy, E*.**
***Catal. Today,* 2016** (267) 167.

42. "*Photocatalytic Conversion of Nitric Oxide on Titanium Dioxide: Cryotrapping of Reaction Products for Online Monitoring by Mass Spectrometry"*
Lu, W.; Olaitana, A. D.; Brantley, M. R.; Behrooz, Z.; Erdogan, D. A.; **Ozensoy, E.;** Solouki, T.
***J. Phys. Chem. C,* 2016** (120) 8056.

43. *"Comparative Analysis of Reactant and Product Adsorption Energies in the Selective Oxidative Coupling of Alcohols to Esters on Au(111)"*
Şenozan, S.; Ustunel, H.; Karatok M.; Vovk, V. I.; Shah, A. A. **Ozensoy, E.** ; Toffoli, D.
***Topics in Catal.,* 2016** (59) 1383.

44. "*Photocatalytic Activity of Mesoporous Graphitic Carbon Nitride (mpg-C3N4) Towards Organic Chromophores under UV and VIS Light Illumination"*
Erdogan, D. A.; Sevim, M.; Kısa, E.; Emiroglu, D. B.; Karatok, M.; Vovk, E. I.; Bjerring, M.; Akbey, Ü.; Metin, Ö.; **Ozensoy, E*.**
***Topics in Catal.,* 2016** (59) 1305.

45. "*A Methodology to Discriminate Between Hydroxyl Radical-induced Processes and Direct Charge-transfer Reactions in Heterogeneous Photocatalysis"*
Bertinetti, S.; Minella, M.; Barsotti, F; Maurino, V.; Minero, C.; **Ozensoy, E.**; Vione, D.
***J. Adv. Oxidation Tech.* 2016** (19) 236.

46. "*Sulfur-Tolerant BaO/ZrO2/TiO2/Al2O3 Quaternary Mixed Oxides for DeNOX Catalysis"*
Say, Z.; Mihai, O.; Tohumeken, M.; Ercan, K.E.; Olsson, L.; **Ozensoy, E*.**
***Catal. Sci. Tech.* 2017** (7) 133.

47. "*Hierarchical Synthesis of Corrugated Photocatalytic TiO2 Microsphere Architectures on Natural Pollen Surfaces"*
Erdogan, D. A; **Ozensoy, E*.**
***Applied Surf. Sci.,* 2017** (403) 159.

48. "*Selective Catalytic Ammonia Oxidation to Nitrogen by Atomic Oxygen Species on Ag(111)"*
Karatok, M.; Vovk, E. I.; Koç, A. V., **Ozensoy, E*.**
***J. Phys. Chem. C,* 2017** (121) 41, 22985.

49. "*Sulfur Poisoning and Regeneration Behavior of Perovskite-Based NO Oxidation Catalysts"*
Kurt, M.; Say, Z.; Ercan, K. E.; Vovk, E. I.; Kim, C. H.; **Ozensoy, E*.**
***Topics in Catal.,* 2017** (60) 40.

50. "*The Effects of Co:Ce Loading Ratio And Reaction Conditions On CDRM Performance Of Co-Ce/Al_2O3 Catalysts"*
Paksoy, A. I.; Caglayan, B. S.; **Ozensoy, E.;** Aksoylu A. E.
***Int. Journal of Hydrogen Energy,* 2018** (43) 4321.

51. *"$Pt/CeO_x/ZrO_x/\gamma$-Al_2O_3 Ternary Mixed Oxide DeNOx Catalyst: Surface Chemistry and NOx Interactions"*
Andonova, S., Ok, A. S., Drenchev, N., **Ozensoy, E.*,** Hadjiivanov, K*.
***J. Phys. Chem. C,* 2018** (122) 24, 12850.

ACADEMIC PUBLICATIONS (Continued):

52. *"Dry reforming of glycerol over Rh-based ceria and zirconia catalysts: New insights on catalyst activity and stability"*
Bulutoglu, P.S.; Say, Z.; Bac, S.; **Ozensoy, E**.*; Avci, A.K*.
***Applied Catal. A: General,* 2018** (564) 157.

53. "*Trade-off between NOx Storage Capacity and Sulfur Tolerance on $Al_2O_3/ZrO_2/TiO_2$ – based $DeNO_x$ Catalysts"*
Say, Z.; Mihai, O.; Kurt, M.; Olsson, L.; **Ozensoy, E*.**
***Catal. Today.,* 2019** (320) 152.

54. *"CdTe Quantum Dot-Functionalized P25 Titania Composite with Enhanced Photocatalytic NO2 Storage Selectivity under UV and Vis Irradiation"*
Leinen, M. B.; Dede, D.; Khan, M. U.; Caglayan, M.; Kocak, Y.; Demir, H.V.; **Ozensoy, E*.**
***ACS Applied Materials & Interfaces,* 2019** (11) 1, 865.

55. *"Enhanced photocatalytic NOx oxidation and storage under visible-light irradiation by anchoring Fe3O4 nanoparticles on mesoporous graphitic carbon nitride (mpg-C3N4)"*
Irfan, M.; Sevim, M.; Kocak, Y.; Balci, M.; Metin, O.; **Ozensoy, E*.**
***Applied Catal. B:Environmental,* 2019** (249) 126.

56. *"Exceptionally active and stable catalysts for CO2 reforming of glycerol to syngas"*
Bac, S.; Say, Z.; Koçak, Y.; Ercan K. E.; Harfouche, M.; **Ozensoy, E.***; Avci, A.K*.
***Applied Catal. B:Environmental,* 2019** (256) 117.

57. *"Enhancement of Formic Acid Dehydrogenation Selectivity of Pd(111) Single Crystal Model Catalyst Surface via Bronsted Bases"*
Karakurt, B.; Kocak, Y.; **Ozensoy, E*.**
***J. Phys. Chem. C,* 2019 (Cover Article)** (123) 47, 28777.

58. *"Enhancement of Photocatalytic NOx Abatement on Titania via Additional Metal Oxide NOx-Storage Domains: Interplay between Surface Acidity, Specific Surface Area, and Humidity"*
Çağlayan, M.; Irfan, M.; Ercan, K., E.; Kocak, Y.; **Ozensoy, E*.**
***Applied Catal. B:Environmental,* 2020** (263) 118227.

59. *"All-Solution-Processed, Oxidation-Resistant Copper Nanowire Networks for Optoelectronic Applications with Year-Long Stability"*
Genlik, SP; Tigan, D; Kocak, Y; Ercan, KE; Cicek, MO; Tunca, S; Koylan, S; Coskun, S; **Ozensoy, E**; Unalan, HE.
***ACS Applied Materials & Interfaces,* 2020** (12) 40, 45136-45144.

60. *"Significance of the Mn-Oxidation State in Catalytic and Noncatalytic Promotional Effects of MnOx Domains in Formic Acid Dehydrogenation on Pd/MnOx Interfaces"*
Karakurt, B.; Kocak, Y.; Lyubinetsky, I.; **Ozensoy, E*.**
***J. Phys. Chem. C,* 2020 (Cover Article)** (124) 41, 22529.

61. *"Core-crown Quantum Nanoplatelets with Favorable Type-II Heterojunctions Boost Charge Separation and Photocatalytic NO Oxidation on TiO2"*
Ebrahimi, E; Irfan, M; Shabani, F; Kocak, Y; Karakurt, B; Erdem, E; Demir, HV; **Ozensoy, E*.**
***CHEMCATCHEM,* 2020** (12) 24, 6329.

62. *"Effects induced by interaction of the Pt/CeOx/ZrOx/gamma-Al2O3 ternary mixed oxide DeNO(x) catalyst with hydrogen"*
Andonova, S; Ok, ZA; **Ozensoy, E***; Hadjiivanov, K*.
***Catalysis Today,* 2020** (357) 664.

63. *"Precious Metal-Free $LaMnO_3$ Perovskite Catalyst with an Optimized Nanostructure for Aerobic C-H Bond Activation Reactions: Alkylarene Oxidation and Naphthol Dimerization"*
Sahin, Y., Sika-Nartey, A., Ercan, K.E., Kocak, Y., Senol, S., **Ozensoy, E.*, Turkmen, Y.E*.**
***ACS Applied Materials & Interfaces,* 2021** (13) 4, 5099.

ACADEMIC PUBLICATIONS (Continued):

64. *"From Aluminum Foil to Two-Dimensional Nanocrystals Using Ultrasonic Exfoliation"*
Lu, W., Birmingham B., Voronine D. V., Stolpman, D., Ambardar, S., Erdogan, D. A., **Ozensoy, E.**, **Zhang, Z.***, **Solouki, T.**
***J. Phys. Chem. C,* 2021** (125) 14, 7746.

65. *"Formaldehyde Selectivity in Methanol Partial Oxidation on Silver:Effect of Reactive Oxygen Species, Surface Reconstruction, andStability of Intermediates"*
Karatok, M., Sensoy, M.G., Vovk, E.I., Ustunel, H., Toffoli, D., **Ozensoy, E*.**
***ACS Catalysis,* 2021** (21) 6200.

66. *"Multichromic Vanadium Pentoxide Thin Films Through Ultrasonic Spray Deposition"*
Tutel, Y.; Durukan, M.; Koc, S.; Koylan, S.; Cakmak, H.; Kocak, Y.; Hekmat, F.; **Ozensoy, E.**; Ozbay, E.; Arslan U. Y.; Toppare, L.; Unalan, H.
***J. Electrochem. Soc.* 2021** (168) 106511.

67. *"Influence of La and Si promoters on the anaerobic heterogeneous catalytic decomposition of ammonium dinitramide (ADN) via alumina supported iridium active sites"*
Kurt, M.; Kap, Z.; Senol, S.; Ercan, K.E.; Sika-Nartey A.T.; Kocak, Y.; Koc, A.; Esiyok, H.; Caglayan B.S.; Aksoylu, A.E.; **Ozensoy, E*.**
***Applied Catalysis A: General,* 2022** *(632) 118500.*

68. *"A Highly Active and Stable Ru Catalyst for Syngas Production via Glycerol Dry Reforming: Unraveling the Interplay Between Support Material and the Active Sites"*
Ozden, M.; Say, Z.; Kocak, S.; Ercan, K.E.; Jalal A.; **Ozensoy, E.*;** Avci, A.K*.
***Applied Catalysis A: General,* 2022** *(636) 118577.*

69. *"Unraveling Molecular Fingerprints of Catalytic Sulfur Poisoning at the Nanometer Scale with Near-Field Infrared Spectroscopy "*
*Say, Z.; Kaya, M.; Kaderoglu, C.; Koçak, Y.; Ercan K.E.; Sika-Nartey, A.T.; Jalal, A.; Turk, A.A.; Langhammer, C.; Jahangirzadeh Varjovi, M.; Durgun, E., **Ozensoy, E*.***
***J. Amer. Chem. Soc.,* 2022, (Cover Article)** *(144) 19, 8848.*

70. *"Two-Dimensional Bimetallic Hydroxide Nanostructures for Catalyzing Low-Temperature Aerobic C–H Bond Activation in Alkylarene and Alcohol Partial Oxidation"*
Sika-Nartey, A. T.; Sahin, Y., Ercan, K. E., Kap, Z.; Kocak, Y., Erdali A. D.; Erdivan B.; Turkmen, Y.E.*; **Ozensoy, E.*,**
***ACS Applied Nanomaterials, 2022**, (5), 12, 18855.*

.

71. *"Interaction of CO2 with MnOx / Pd(111) Reverse Model Catalytic Interfaces"*
Anil, A..; Sadak, O.F.; Karakurt, B.; Kocak, Y.; Lyubinetsky, I.; **Ozensoy, E.*,**
***ChemPhysChem, 2023** (24) 13, e20220078.*

72. *"Low-Pressure Deuterium Storage on Palladium-Coated Titanium Nanofilms: A Versatile Model System for Tritium-Based Betavoltaic Battery Applications"*
Ghobadi, T.G.U.; Kocak, Y. ; Jalal, A.; Altinkaynak, Y.; Celik, G.; Semiz, T.; Cakir, C.; Butun, B.; Ozbay, E*.; Karadas, F.*, **Ozensoy, E.*,**
***ACS Applied Materials & Interfaces, 2023* (Cover Article)** *(144) 19, 8848.*

73. *"Origins of the Photocatalytic NO x Oxidation and Storage Selectivity of Mixed Metal Oxide Photocatalysts: Prevalence of Electron-Mediated Routes, Surface Area, and Basicity"*
Ebrahimi, E.; Irfan, M.; Kocak, Y.; Rostas, A.M.; Erdem, E.; **Ozensoy, E.*,**
***J. Phys. Chem. C,* 2024** (128) 4, 1669.

CONFERENCE PRESENTATIONS:

1. **2002** **224th ACS National Meeting**, Division of Colloid and Surface Chemistry**,** Boston, MA, ***Poster Presentation:*** " In-situ infrared spectroscopic investigation of CO and NO adsorption on Pd(111) at quasi-atmospheric pressures"

2. **2002** **224th ACS National Meeting**, Division of Colloid and Surface Chemistry, Boston, MA, ***Oral Presentation:*** " In-situ monitoring of the CO+NO reaction on Pd(111) at elevated pressures using polarization modulation infrared reflection absorption spectroscopy"

3. **2003** **Industry-University Cooperative Chemistry Program (IUCCP) 2003**, Texas A&M University, College Station, TX. ***Oral Presentation:*** "Understanding Heterogeneous Catalysis via Model Catalysts"

4. **2003** **Symposium on Recent Advances in Epoxidation Catalysis**, Texas A&M University, College Station, TX. ***Poster Presentation:*** " Polarization Modulation Infrared Reflection Absorption Spectroscopy for Heterogeneous Catalytic Applications"

5. **2003** **Texas Surface Science Round-Up 2003**, Roundtop, TX, ***Oral Presentation:*** "Investigation of the ordered overlayers in CO/Pd(111) and NO/Pd(111) adsorption systems at elevated pressures"

6. **2003** **225th ACS National Meeting**, Division of Industrial Chemistry-Nanotechnology and the Environment, New Orleans, LA, ***Oral Presentation:*** "CO + NO Reaction: From Pd Single Crystals at Ultrahigh Vacuum to Pd Clusters Supported on SiO_2 Thin Films at Elevated Pressures

7. **2003** **63rd Physical Electronics Conference**, Cornell University, Ithaca, NY, ***Oral Presentation:*** "Bridging the gap between surface science and heterogeneous catalysis"

8. **2003** **18th North American Catalysis Society Meeting**, Cancun, Mexico, ***Oral Presentation:*** "A model catalyst study of the CO+NO reaction on Pd (111) at elevated pressures using in situ vibrational spectroscopy"

9. **2004** **Gordon Research Conference on Catalysis 2004,** New London, NH. ***Poster Presentation:*** "On the reversibility/irreversibility of the effects of pressure and temperature on the heterogeneous catalytic systems"

10. **2004** **AVS 51th International Symposium 2004**, Anaheim, CA. ***Oral Presentation:*** "Novel NO adsorption states at elevated pressures"

11. **2005** **229th ACS National Meeting**, San Diego, CA. Division of Colloid and Surface Chemistry, ***Oral Presentation*****:** "Probing the morphological and electronic structure of epitaxially grown ultrathin film oxides via H_2O adsorption".

12. **2005** **19th North American Catalysis Society Meeting**, Philedelphia, PA. ***Oral Presentation*****:** "Interaction of NO_2 and H_2O with ordered Al_2O_3 ultra thin films grown on NiAl(100)".

13. **2005** **AVS Pacific Northwest Division Meeting**, Portland, OR. ***Oral Presentation*****:** "Model Catalyst Studies for a Molecular Understanding of NO_x-Storage-Reduction Catalysts".

14. **2005** **AVS 52nd International Symposium**, Boston, MA. ***Oral Presentation:*** " NO_x Storage on $BaO/\theta\text{-}Al_2O_3/NiAl(100)$ Model Catalyst"

15. **2006** **International Congress on Operando Spectroscopy-II**, Toledo, Spain. ***Poster Presentation:*** "On the Reversibility/Irreversibility of the Effects of Pressure and Temperature on the Heterogeneous Catalytic Systems"

16. **2006** **The Seventh International Conference on Chemical Physics**, Egirdir, Turkey. ***Oral Presentation:*** "Model Catalyst Studies for NO_x Abatement"

17. **2006** **TOBB E.T. University**, Ankara, Turkey, **INVITED** ***Oral Presentation:*** " Implications of Nanotechnology on Hydrogen Economy"

CONFERENCE PRESENTATIONS (CONTINUED):

18. 2006 **Koç University**, İstanbul, Turkey, **INVITED *Oral Presentation:*** " Bridging the Gap Between Surface Science and Catalysis"

19. 2006 **Hacetepe University**, Ankara, Turkey, ***Oral Presentation:*** " Surface Science of Model Catalysts"

20. 2006 **Anatolian Workshop on Catalysis,** METU, Ankara, Turkey, ***Oral Presentation:*** "NOx Storage Reduction Catalysts"

21. 2006 **Middle East Technical University**, Ankara, Turkey, ***Oral Presentation:*** " Surface Science of Model Catalysts"

22. 2006 **Fritz Haber Institute der Max Planck Gesellschaft,** Berlin, Germany, **INVITED *Oral Presentation:*** "Understanding Catalysis via Model Systems".

23. 2006 **AVS 53rd International Symposium**, San Francisco, CA. ***Oral Presentation:*** "NO_2 and H_2O adsorption on BaO/θ-Al_2O_3/NiAl(100)"

24. 2007 **Turkish Catalysis Society 1st National Congress**, Güzelyurt, Kıbrıs, ***Oral Presentation:*** " Surface Science for a fundamental understanding of catalysis"

25. 2007 **Somer Symposium Series-I**, METU, Ankara, **INVITED *Oral Presentation:*** "Model Catalyst Studies on NOx-Storage-Reduction Catalysts"

26. 2007 **Workshop on NOx Abatement Catalysts**, METU, Ankara, **INVITED *Oral Presentation:*** "On the General Properties of NSR Catalysts"

27. 2007 **20th North American Catalysis Society Meeting,** Houston, TX**, *Poster Presentation:*** "NOx Reduction on a Transition Metal Free Alumina Catalyst Using Dimethylether"

28. 2007 **X. National Spectroscopy Conference**, IYTE, Izmir, Turkey, **INVITED *Oral Presentation:*** "A Novel in-situ Molecular Spectroscopy for Surface Reactions at Elevated Temperatures and Pressures"

29. 2007 N**anoTR-III,** Bilkent University, Ankara, Turkey, **INVITED *Oral Presentation:*** "Model Catalysts for Environmental Pollution Control"

30. 2008 **Swiss Federal Institute of Technology Zurich (ETH Zurich)**, Zurich, Switzerland, **INVITED *Oral Presentation:*** "In-situ vibrational spectroscopy at elevated pressures"

31. 2008 **235th ACS National Meeting**, New Orleans, LA. Division of Colloid and Surface Chemistry, ***Poster Presentation*****:** "DME-NO2 interactions on Alumina via in-situ FTIR spectroscopy".

32. 2008 **Texas A&M University**, **Department of Chemistry**, College Station, TX, , **INVITED *Oral Presentation*****:** "Model Catalyst Studies on NSR Systems".

33. 2008 **8th Chemical Physics Conference, ITU, Istanbul, Oral *Presentation*****:** "Model Catalsyst Studies on NOx Storage Systems".

34. 2008 **National Catalysis Conference-2**, Palandöken, Erzurum **Oral *Presentation*****:** "NO_2 and DME interactions on Alumina".

35. 2009 **21st North American Catalysis Society Meeting**, San Francisco, CA. **Poster *Presentation*****:** "Fe-Promoted NSR catalysts".

36. 2009 **EUROPACAT IX** , Salamanca, Spain **Poster *Presentation*****:** "Novel NO_x Storage System: TiO_2/BaO/Al_2O_3".

37. 2009 **VIII. International Conference on Mechanisms of Catalytic Reactions**, Novosibirsk, Russia, **Oral *Presentation*****:** "Novel Ternary Oxide NO_x Storage Materials ".

38. 2009 **Queen's University Chemistry Department,** Belfast, UK, **Oral *Presentation*****:** "Surface Science Studies on Model Catalysts: From TWC's to NSR".

CONFERENCE PRESENTATIONS (CONTINUED):

39. 2009 **ECASIA IX, European Conference on Applications of Surface and Interface Analysis, A**ntalya, Turkey, ***Oral Presentation***: " Ti Promoted NO_x Storage Materials".

40. 2009 **Gazi University, Chemical Engineering Department**, **INVITED *Oral Presentation*:** "Fundamental Catalytic Methods for Automotive Emission Control".

41. 2009 **METU-TUD Research and Educational Network on Nanomaterials and Nanotechnology for Renewables,** Ankara, Turkey, **INVITED *Oral Presentation*:** "Mixed Ternary Oxide Systems as NO_x Storage Materials".

42. 2010 **240th ACS National Meeting**, Boston, MA, Division of Environmental Chemistry, ***Oral Presentation*:** "Controlling the surface dispersion of BaO domains on NO_x storage materials via TiO_2 anchoring sites".

43. 2010 **240th ACS National Meeting**, Boston, MA, Division of Colloid and Surface Chemistry, ***Poster Presentation*:** "Structural and NO_x Uptake Properties of Fe Promoted NO_x Storage Materials".

44. 2010 **Ankara Chamber of Commerce Nanotechnology Workshop,** Ankara, turkey, **INVITED Oral *Presentation*:** "Catalysis for the Future Hydrogen Economy".

45. 2010 **6th European Federation of Catalysis Societies (EFCATS) Summer School**, İzmir, Turkey, **Oral *Presentation*:** "Novel Trends in Diesel Emission Catalsyst".

46. 2010 **NANOTR-VI**, İzmir, Turkey, **INVITED Oral *Presentation*:** "Novel NOx Storage Materials via Well-Controlled Surface Chemistry of Oxide Nano-domains".

47. 2010 **National Catalysis Conference –III**, Zonguldak, Turkey, **Oral *Presentation*:** "Influence of Surface FeOx Domains On the NOx Storage Mechanism of NSR Catalysts".

48. 2010 **Synthesis and Characterization of Nanomaterials (SCAN 2010) Workshop**, Ankara, Turkey, **Oral *Presentation*:** "Novel Mixed Oxides With Tunable Surface Properties".

49. 2010 **Turkish Academy of Sciences Annual Meeting**, Istanbul , Turkey, **Oral *Presentation*:** "Towards a Molecular Understanding of Automotive Catalysis Through Surface Science".

50. 2010 **XI. Netherlands Catalysis Conference**, Noordwijkerhout, Netherlands, **Poster *Presentation*:** "$BaO/TiO_2/\gamma$-Al_2O_3 Ternary-Oxide Systems as NO_x Storage Materials".

51. 2010 N**anoTR-VI,** İzmir, Turkey, ***Oral Presentation:*** "Novel NO_x Storage Materials via Well-Controlled Surface Chemistry of Oxide Nano-domains "

52. 2010 **Gazi University, Chemistry Departmental Seminars,** Ankara, Turkey, ***Oral Presentation:*** " Surface Chemistry for Automotive Emission Control Catalysis"

53. 2011 **22nd North American Catalysis Society Meeting,** Detroit**,** MI**, Poster *Presentation:*** "NO_x interaction with model BaO/Pt(111) NSR catalysts: Effect of BaO film thickness"

54. 2011 **Turkish Academy of Sciences Annual Meeting**, Izmir , Turkey, **Oral *Presentation*:** "Surface Science Studies Towards Understanding Catalytic Reactions at the Atomic Scale".

55. 2011 **2011 Year of Chemistry Workshop,** Ankara, Turkey, **Oral *Presentation:*** "Chemistry on wheels: Automotive Catalysts"

56. 2011 **ENCAMP 2011 Workshop**, Cappadoccia , Turkey, **Oral *Presentation*:** "NO_x Uptake and Storage Properties of BaO_x/Pt(111) Model Catalyst Surfaces".

57. 2011 **EUROPACAT-X** , Glasgow, UK, **Poster *Presentation*:** "TiO_2 -promoted NO_x storage materials with enhanced sulfur tolerance".

58. 2011 **EUROPACAT-X** , Glasgow, UK, **Oral *Presentation*:** "NO_x Uptake and Storage Properties of BaO_x/Pt(111) Model Catalyst: Influence of Ba Coverage, Surface Morphology and Stoichiometry".

CONFERENCE PRESENTATIONS (CONTINUED):

59. 2011 **Nanotechnology Days (Ankara University)**, Ankara, Turkey, **Oral *Presentation*:** "Catalytic properties of nanoparticles and the catalytic functionalities of surfaces".

60. 2011 N**anoTR-VII,** Istanbul, Turkey, ***Oral Presentation:*** "NO_x Uptake and Storage Properties of BaO_x/Pt(111) Model Catalyst Surfaces"

61. 2011 N**anoTR-VII,** Istanbul, Turkey, ***Oral Presentation:*** "Controlling the Surface Dispersion of BaO Domains on NO_x Storage Materials via TiO_2 Anchoring Sites"

62. 2011 **NOEA 2011,** Zakopane, Poland, ***Oral Presentation:*** "Tunable Surface Chemistry of Ti-promoted NSR Catalysts"

63. 2011 **NOEA 2011,** Zakopane, Poland, ***Poster Presentation:*** "Interaction of NO_2 (g) with BaO_x / Pt (111) and BaO_x/ TiO_2/ Pt (111) Model Catalysts "

64. 2012 **243rd ACS National Meeting**, San Diego, CA, Division of Colloid and Surface Chemistry, ***Oral Presentation*:** "UHV Surface Science studies on Ti-promoted NSR Catalysts".

65. 2012 **Boğaziçi University Chemistry Department Seminar**, Istanbul, Turkey. **INVITED *Oral Presentation*:** "Towards a Molecular Understanding of Catalysis by Surface Science".

66. 2012 **Koç University Faculty of Science Seminar**, Istanbul, Turkey. **INVITED *Oral Presentation*:** "Surface Sensitive Spectroscopic Studies to Understand Catalysis at the Molecular Level".

67. 2012 **METU Chemical Engineering Department Seminar**, Istanbul, Turkey. **INVITED *Oral Presentation*:** "Towards a Molecular Understanding of Catalysis by Surface Science".

68. 2012 **National Catalysis Conference-4**, Kocaeli, Turkey **Oral *Presentation*:** "Ti-Promoted NSR Catalysts".

69. 2012 **KEYNOTE LECTURE: IX International Conference "Mechanisms of Catalytic Reactions"**, St. Petersburg, Russia.
"Understanding Thermal and Photocatalytic Chemical Routes for NO_x Storage at the Molecular Level".

70. 2012 **INVITED Research Lecture: General Motors Corporation R&D Labs,** Warren, MI.
"Towards a Molecular Level Understanding of Automotive Catalysis via Surface Science"

71. 2013 **KEYNOTE LECTURE: 44th IUPAC Word Chemistry Congress**
"Understanding Heterogeneous Catalysis at the Molecular Level"

72. 2013 **INVITED Research Seminar,** NCSR Demokritos Materials Institute, Athens, Greece**:**
"Photocatalytic NOx Oxidation and Storage (PhoNOS) Systems"

73. 2013 **KEYNOTE LECTURE: Advanced Materials World Congress (AMWC 2013), Çeşme, Turkey**
"Tayloring the Surface Properties of Mixed Oxide Nano-Domains for Catalysis"

74. 2013 **23rd North American Catalysis Society Meeting 2013. Oral Presentation:**
"Sulfur Tolerant Pt-Free Perovskite Materials as Next Generation DeNOx Catalysts"

75. 2013 **INVITED LECTURE: NANOTR-9, Erzurum, Turkey**
"Understanding Catalysis at the Molecular Level: from Thermal Catalysis to Photocatalysis "

76. 2013 **EUROPACAT-XI** , Lyon, France, **Oral Presentation:** "Next Generation Perovskite Based NO Oxidation Catalysts".

77. 2013 **EUROPACAT-XI** , Lyon, France, **Oral Presentation:** "Photocatalytic NOx Oxidation and Storage Systems".

78. 2014 **INVITED LECTURE: Dalian Institute of Chemical Physics**, Dalian, China,
"Bridging the Gap Between Model Catalysts and Real World Catalysts via Chemical Physics "

79. 2014 **INVITED LECTURE: International Conference on Catalysis**, Beijing, China,
"Next Generation Perovskite Catalysts for DeNOx Applications "

CONFERENCE PRESENTATIONS (CONTINUED):

80. 2014 **INVITED LECTURE: ALBA Syncrothron Facility**, Barcelona, Spain,
"In-situ Characterization of Catalytic Surfaces by Electronic and Vibrational Spectroscopies

81. 2014 **INVITED LECTURE: CNR-ISMN,** Palermo, Italy,
"Sulfur Tolerant Pt-Free Perovskite Materials as Next Generation DeNOx Catalysts"

82. 2014 **INVITED LECTURE: Baylor University,** Waco, TX
"Understanding Catalysis at the Molecular Level: From Photocatalysis to Thermocatalysis "

83. 2014 **INVITED LECTURE: 30th European Conference on Surface Science,** Antalya, Turkey
"Surface Science Studies for Elucidating Catalytic Reaction Mechanisms at the Molecular Level"

84. 2014 **INVITED LECTURE: Turkish Crystallography Conference**, Diyarbakır, Turkey
"Low Energy Electron Diffraction: A Surface Sensitive Characterization Tool"

85. 2014 **INVITED LECTURE: Gazi University Chemistry Department Seminar**, Ankara, Turkey,
"Understanding Catalysis via Surface Science "

86. 2014 **INVITED LECTURE: National Catalysis Conference-V**, Adana, Turkey,
"Mixed-Perovskite Catalysts for Superior NOx Storage and Reduction"

87. 2014 **INVITED LECTURE: University of Erlangen,** Nürnberg, Germany
"Model Catalysts for Elucidating Surface Reaction Mechanisms at the Molecular Level"

88. 2014 **INVITED LECTURE: MOLCHEM Conference, Istanbul Technical University,** Istanbul, Turkey.
"Model Catalysts for Elucidating Surface Reaction Mechanisms at the Molecular Level"

89. 2014 **ICTF 16: International Conference on Thin Films,** Dubrovnik, Croatia. Oral Presentation:
"Thin Films for Surface Science and Catalysis"

90. 2014 **American Chemical Society National Meeting**, San Francisco, CA, **Oral Presentation**:
"Palladium Doped Perovskite-Based NO Oxidation Catalysts: The Role of Pd and B-sites for NOx/SOx Adsorption"

91. 2015 **INVITED LECTURE: TÜBİTAK-MAM GAZTEM Workshop**, İzmir, Turkey.
"Surface Sensitive Characterization Tools for Catalysis"

92. 2015 **EUROPACAT-XII**, Kazan, Russia, **Oral *Presentation*:** "Bio-inspired "Buckyball-shaped" Photocatalytic Architectures".

93. 2015 **EUROPACAT-XII**, Kazan, Russia, **Oral *Presentation*:** "Going Heterogeneous in the Additive-Free Hydrogen Production from Formic Acid".

94. 2015 **INVITED LECTURE: PhD School for Young Scientists**, Kazan, Russia, "Exhaust Emission Control Catalysts".

95. 2015 **INVITED LECTURE: National Chemistry Conference**, Canakkale, Turkey,
"Model Catalysts for Mechanisms of Catalytic Reactions".

96. 2015 **INVITED LECTURE: KUTEM Seminar Series**, **Koç University**, Istanbul, Turkey.
"Understanding Catalytic Materials at the Molecular Level".

97. 2016 **INVITED LECTURE: Deutsches Elektronen Sycnrothron (DESY)**, **Hamburg, Germany**.
"Reaction Mechanisms of Thermal and Photocatalytic Reactions via Surface Science".

98. 2016 **INVITED LECTURE: Bulgarian Academy of Sciences, Institute of Inorganic Chemistry, Sofia, Bulgaria.**
"Model Catalysts for Elucidating Surface Reaction Mechanisms at the Molecular Level"

99. 2016 **INVITED LECTURE: International Conference on Catalysis 2016, Beijing, China.**
"Heterogeneous Catalysts for Environmental Protection and Environmentally Friendly Energy Conversion Systems"

100. 2016 **INVITED LECTURE: Technical University of Darmstadt, Chemistry Department, 2016, Darmstadt, Germany.**
"Heterogeneous Catalysts for Environmental Protection and Environmentally Friendly Energy Conversion Systems"

CONFERENCE PRESENTATIONS (CONTINUED):

101. 2016 **INVITED LECTURE: 16th International Congress on Catalysis (ICC) , 2016, Beijing, China.**
"Heterogeneous Catalysts for Environmental Protection and Environmentally Friendly Energy Conversion Systems"

102. 2016 **INVITED LECTURE: 16th International Congress on Catalysis (ICC) , 2016, Beijing, China.**
"Heterogeneous Catalysts for Environmental Protection and Environmentally Friendly Energy Conversion Systems"

103. 2017 **INVITED LECTURE: Bilkent University Chemistry Discussions (BUCD), 2017,** Ankara, Turkey.
"Catalysis for Energy & Environment"

104. 2017 **INVITED LECTURE: National Inorganic Chemistry Conference, 2017,** Burdur, Turkey.
"Surface-sensitive Characterization Methods for Understanding Catalysis at the Atomic Level"

105. 2017 **INVITED LECTURE: IWANN Conference 2017,** Bilkent, Ankara, Turkey.
"Environmentally Friendly and Sustainable Catalysis"

106. 2017 **25th North American Catalysis Society (NAM) Meeting, 2017, Denver USA**, **Oral *Presentation*:** .
"Understanding Exothermic Catalytic Decomposition of Ionic Liquids Under Anaerobic Conditions: New Structure Functionality Relationships"

107. 2017 **SESAME Synchrotron Stakeholders Meeting, 2017, Amman, Jordan**, **Oral *Presentation*:** .
"Understanding Exothermic Catalytic Decomposition of Ionic Liquids Under Anaerobic Conditions: New Structure Functionality Relationships"

108. 2017 **RESEARCH TRAINING FOR TÜPRAŞ R&D STAFF, 2017,** Kocaeli, Turkey
"Fundamentals of Vibrational Spectroscopy and Mass Spectroscopy and their Applications in Heterogeneous Catalysis"

109. 2017 **INVITED LECTURE: Weizmann Institute, Israel-Turkey workshop on NANOSCIENCE & NANOTECHNOLOGY 2017, Rehovot, Israel**.
"Understanding Catalytic Materials at the Molecular Level: From Thermal Chemistry to Photochemistry"

110. 2017 **INVITED LECTURE: Why Science is relevant for Science?**, Bilkent, Ankara, Turkey.
"There is ONE Science !"

111. 2018 **INVITED LECTURE: Koç University Chemistry Department Seminar**, İstanbul, Turkey.
"Catalytic Nanomaterials for Environment & Renewable Energy"

112. 2018 **INVITED LECTURE: DESY-TARLA-TAEK-TUBITAK Workshop**, **Brussels, Belgium.**
"Synchrotron User Activities and Nanotechnology Research in Turkey"

113. 2018 **INVITED LECTURE: TAEK Workshop on Turkish Accelerator Light Source Users**, TAEK, Ankara, Turkey**.**
"SNOM NanoIR Microscopy in TARLA and SESAME Activities of Turkey"

114. 2018 **INVITED LECTURE: Chemical Physics Conference-XII,** Safranbolu, Turkey**.**
"A Tale of Two Catalysts"

115. 2018 **National Catalysis Conference-7**, Denizli Turkey, Turkey**, Oral Presentation.**
"Nature of Oxygen Species On Au(111) And Ag(111) Model Catalysts And Their Role In O-H, C-H, C-C, N-H Bond Activation"

116. 2018 **INVITED LECTURE**, SESAME SAC Meeting, Amman**, Jordan.**
"TAEK-TARLA-SESAME Soft X-ray End Station Project"

117. 2019 **INVITED LECTURE: American Chemical Society National Meeting**, Orlando, FL, **USA.**
"Dry Reforming of Glycerol Over Ceria, Zirconia and Alumina-Zirconia-Titania supported Rh, Co, Ni Catalysts: New Insights on Catalyst Activity and Stability"

118. 2019 **EUROPACAT-XIII**, Aachen, **Germany**. **Oral Presentation.**
"CdTe Quantum Dot-Functionalized P25 Titania Composite with Enhanced Photocatalytic NO2 Storage Selectivity under UV and VIS Irradiation"

CONFERENCE PRESENTATIONS (CONTINUED):

119. 2019 **26th North American Catalysis Society Meeting**, Chicago, IL, **USA**. **Oral Presentation.**
"CdTe Quantum Dot-Functionalized P25 Titania Composite with Enhanced Photocatalytic NO2 Storage Selectivity under UV and VIS Irradiation"

120. 2019 **INVITED LECTURE: 5th Anatolian School of Catalysis**, İzmir, Turkey.
"Vibrational Imaging of Nanomaterial Surfaces with Scanning Nearfield Optical Microscopy"

121. 2019 **INVITED LECTURE: NanoTR-15 Conference**, Antalya, Turkey.
"Molecular-level Origins of Life and Death of Two Catalysts"

122. 2019 **INVITED LECTURE: Hacettepe University Chemical Engineering Department Seminar** Ankara, Turkey.
"Catalysis for Energy, Environment and Aerospace"

123. 2020 **INVITED LECTURE: American Chemical Society National Meeting**, San Francisco, CA, **USA.**
"Unraveling the spectral fingerprints of sulfur poisoning on Pd/Al2O3 model catalyst with nanometer scale resolution via near-field nano-FTIR spectroscopy"

124. 2020 **INVITED LECTURE: SESAME Synchrotron Facility Scientific Advisory Board Meeting,** Amman, **Jordan.**
"Turkish Soft X-ray Photoelectron Spectroscopy Beamline Project"

125. 2021 **INVITED LECTURE: National Catalysis Conference-VIII,** Turkey**.**
"Unraveling spectral fingerprints of sulfur poisoning via near-field Nano-FTIR spectroscopy"

126. 2021 **INVITED LECTURE: TENMAK Synchrotron Research Workshop,** Ankara, **Turkey.**
"TXPES: Turkish Soft X-ray Photoelectron Spectroscopy Beamline at SESAME"

127. 2021 **INVITED LECTURE: Anadolu University Gifted High School Student Program,** Eskişehir, **Turkey.**
"10 Chemical Innovations that will shape the future"

128. 2022 **INVITED LECTURE: Pakistan International School on Physics & Allied Disciplines (ISPAD-2022), Islamabad, Pakistan.**
"Beating Abbe's Diffraction Limit in Catalysis Research via Near-field Nano-FTIR spectroscopy"

129. 2022 **INVITED LECTURE: HESEB-SESAME Workshop,** İstanbul University, İstanbul. Turkey.
"Turkish X-ray Photoelectron Spectroscopy -TXPES- Beamline at SESAME"

130. 2022 **INVITED LECTURE: 6th Anatolian Graduate School on Catalysis,** İzmir, Turkey.
"Surface Chemistry of Single Crystal Surfaces"

131. 2022 **INVITED LECTURE: SESAME Synchrotron Facility Scientific Advisory Board Meeting,** Amman, **Jordan.**
"Design Features of TXPES End Station and X-ray Optics Beamline"

132. 2023 **INVITED LECTURE: Asian Chemistry Conference ACC2023,** İstanbul, **Turkey.**
"Unraveling Molecular Fingerprints of Catalytic Sulfur Poisoning at the Nanometer Scale"

133. 2023 **INVITED LECTURE: Discover the Future of Science at CERN & SESAME Workshop, Bahrein.**
"TXPES Beamline at SESAME"

134. 2023 **INVITED LECTURE: HESEB Workshop, Julich, Germany**
"Design and operational features of TXPES Beamline at SESAME"

135. 2023 **INVITED LECTURE: METU Chemistry Department, Ankara, Turkey**
"Who Cares about Catalysis?"

136. 2023 **North American Catalysis Society Meeting 2023, Providence, Rhode Island**
"Beating Abbe's Diffraction Limit via Near-Field Nano-FTIR Spectroscopy"

137. 2023 **INVITED LECTURE: 26th National Microscopy Conference, Eskişehir, Turkey**
"Ultra-high Resolution Nano-FTIR Spectroscopy & Microscopy"

138. 2023 **9th National Catalysis Conference (NCC9), Çanakkale, Turkey, Oral Presentation** "TXPES Synchrotron Project"

ORGANIZED SCIENTIFIC MEETINGS:

2007 **1st National Catalysis Congress,** Güzelyurt, Cyprus
(Organization Committee Member) http://www.metucenter.metu.edu.tr/ncc1/

2008 **2nd National Catalysis Congress,** Palandoken, Erzurum, Turkey
(Co-Chair) http://www.metucenter.metu.edu.tr/ncc2

2009 **ECASIA IX, European Conference on Applications of Surface and Interface Analysis,** Antalya, Turkey
(Scientific Committee Member) http://www.arber.com.tr/ecasia09.org/

2010 **European Federation of Catalysis Societies (EFCATS) 6th Summer School ,** Izmir, Turkey,
(Conference Secretary) http://www.arber.com.tr/catalysisschool.org

2010 **Synthesis and Characterization of Nanomaterials (SCAN 2010) Workshop and School,** Ankara, Turkey
(Co-Chair) http://www.fen.bilkent.edu.tr/~regpot/scan2010/

2012 **4th National Catalysis Congress,** Kocaeli, Turkey
(Chair) http://www.arber.com.tr/ncc4.org/

2016 **6th National Catalysis Congress,** Bursa, Turkey
(Organization Committee Member) http://ncc6.btu.edu.tr/index.php

2016 **DESY-XFEL-Turkey Workshop, Deutsches Elektronen Sycnrothron , Hamburg, Germany**
(Co-Chair) http://kib.desy.de/bilim

2016 **Bilkent Chemistry Discussions (BCD) Workshop for Graduate Students**, Bilkent, Ankara, Turkey
(Co-Chair) http://www.fen.bilkent.edu.tr/~cvchem/chemdisc.html

2018 **TAEK Workshop on Turkish Accelerator Light Source Users, TAEK, Ankara, Turkey**
(Chair)

2023 **19th Asian Chemistry Congress (https://acc2023.org/), Istanbul, Turkey**
(Organizing Committee Member)

BOOK CHAPTERS:

2005 "*Nanotechnology and the Environment: Applications and Implications*"
"A Vibrational Spectroscopic Study of the CO + NO Reaction: From Pd Single Crystals at Ultrahigh Vacuum to Pd Clusters Supported on SiO_2 Thin Films at elevated Pressures" **Ozensoy, E.**; Goodman, D. W.

Edited by B. Karn, T. Masciangioli, W. Zhang, V. Colvin and P. Alivisatos
Oxford University Press, New York, NY.

PEER REVIEWING FOR SCIENTIFIC JOURNALS:

2003-present Journal of the American Chemical Society
2003-present Journal of Physical Chemistry B
2003-present Catalysis Letters
2004-present Journal of Electron Spectroscopy and Related Phenomena
2005-present ChemPhysChem
2005-present Langmuir
2005-present Applied Catalysis B: Environmental
2007-present Journal of Materials Chemistry
2007-present Journal of Physical Chemistry C
2007-present European Journal of Physical Chemistry B
2007-present Physical Chemistry Chemical Physics
2007-present Modern Physics Letters
2007-present Journal of Catalysis
2008-present Industry and Engineering Chemistry Research
2010-present Applied Surface Science
2010-present Catalysis Today
2010-present Surface and Interface Analysis
2011-present Catalysis Communications
2011-present Topics in Catalysis
2012-present Chemical Reviews
2018-present ACS Catalysis

AFFILIATIONS:

2006-present Turkish Catalysis Society (TCS) (**Secretary and *Founding Member)***

1999-present American Chemical Society (ACS) (Member)

2003-present American Vacuum Society (AVS) (Member)

2003-present North American Catalysis Society (NACS) (Member)

POPULAR SCIENCE ARTICLES:

2006 *"Major Challenges of Hydrogen Energy Technology and What Nanotechnology Can Offer"*
Ozensoy, E.; Tübitak Bilim ve Teknik Dergisi, November, 2006

2006 *"Mysterious Surface Chemistry of Nano-structures and the Catalytic Behavior of Nanoparticles"*
Ozensoy, E.; Tübitak Bilim ve Teknik Dergisi, December, 2006

2007 *"Catalytic Nanoparticles for Environment "*
Ozensoy, E.; Bilim ve Ütopya Dergisi, February, 2007

DISSERTATIONS SUPERVISED:

1. 2009 **Emine Kayhan**, ***Master of Science in Chemistry***, Dissertation Title *"Structure and NO_x Uptake Properties Of Fe-Ba/Al_2O_3 as a Model NO_x Storage Material".*

2. 2010 **Göksu Seda Şentürk**, ***Master of Science in Chemistry***, Dissertation Title *"Finding An Optimum Surface Chemistry For BaO/TiO_2/Al_2O_3 Systems as NO_x Storage Materials"*

3. 2011 **Emre Emmez**, ***Master of Science in Chemistry***, Dissertation Title *"BaO_x/Pt(111) and BaO_x/TiO_2/Pt(111) Model Catalysts for Understanding Model NO_x Storage Reduction (NSR) Catalysis at the Molecular Level".*

4. 2011 **Emrah Parmak**, ***Master of Science in Chemistry***, Dissertation Title *"Sulfur Tolerance of Fe-Promoted BaO/Al_2O_3 Systems as NO_x Storage Materials"*

5. 2011 **Zafer Say**, ***Master of Science in Chemistry***, Dissertation Title *"Ceria Promoted NO_x Storage Reduction Materials".*

DISSERTATIONS SUPERVISED (continued):

6. 2012 **Aslı M. Soylu**, ***Master of Science in Chemistry***, Dissertation Title *"Photocatalytic NOx Oxidation and Storage for Air Purification".*

7. 2013 **Merve Doğaç**, ***Master of Science in Chemistry***, Dissertation Title *"Pt-Free Perovskite Based Oxidation Catalysts For Automotive Applications".*

8. 2014 **Pelin Altay**, ***Master of Science in Chemistry***, Dissertation Title *"Electronically Modified Photocatalytic NOx Oxidation and Storage Catalysts for Visible Excitation".*

9. 2014 **Syed A. A. Shah**, ***Master of Science in Chemistry***, Dissertation Title *"Temperature Programmed Desorption (TPD) Studies on Adsorption of Alcohols, Ethers, Aldehydes, Ketones and Esters on the Au(111) Single Crystal Model Catalyst Surface".*

10. 2015 **Kerem E. Ercan**, ***Master of Science in Chemistry***, Dissertation Title *"Novel Hybrid Perovskite Catalysts for De-NOx Applications".*

11. 2015 **Zafer Say**, ***PhD. in Chemistry***, Dissertation Title *"Investigation Of NO_2 And SO_2 Adsorption/Desorption Properties of Advanced Ternary And Quaternary Mixed Oxides For DeNox Catalysis".*

12. 2016 **Zehra Aybegüm Samast**, ***Master of Science in Chemistry***, Dissertation Title *"Utilization Of Reducible Mixed Metal Oxides As Promoters For The Enhancement Of Sulfur Regeneration In NSR Catalysts".*

13. 2017 **Merve Tohumeken**, ***Master of Science in Chemistry***, Dissertation Title *"Designing Novel Denox Catalysts With A Wide Thermal Operational Window".*

14. 2017 **Mustafa Karatok**, ***PhD. in Chemistry***, Dissertation Title *"Nature of Oxygen Species On Au(111) and Ag(111) Model Catalysts and Their Role In O-H, C-H, C-C, N-H Bond Activation".*

15. 2017 **Elif Perşembe**, ***Master of Science in Chemistry***, Dissertation Title *"Trimetalic Heterogeneous Catalyst For Dehydrogenation of Formic Acid With Enhanced CO Tolerance".*

16. 2017 **Mustafa Çağlayan**, ***Master of Science in Chemistry***, Dissertation Title *"Enhanced Photocatalytic NOx Oxidation-Storage Over Titania-Metal Oxide Physical Mixtures Under UV And Visible Light".*

17. 2018 **Merve Balcı**, ***Master of Science in Chemistry***, Dissertation Title *"Quantum Dot Functionalized Titania Systems For Photocatalytic Oxidative NOx Storage".*

18. 2020 **Bartu Karakurt, *Master of Science in Chemistry*,** Dissertation Title *"Effects of Brønsted And Lewis Bases On Formic Acid Dehydrogenation Selectivity of Pd(111) Single Crystal Model Catalyst"*

19. 2020 **Elnaz Ebrahimi, *Master of Science in Chemistry*,** Dissertation Title *"Core-Crown Quantum-Well Nanoplatelet Functionalized TiO_2 For Photocatalytic NOx Abatement"*

20. 2021 **Abel Tetteh Sika-Nartey**, ***Master of Science in Chemistry***, Dissertation Title *"Catalytic Metal Hydroxide Nanostructures: Aerobic C-H Activation And Catalytic Low Temperature Carbon Monoxide Oxidation By $Ni_xMn_{(1-X)}(OH)_2$".*

21. 2021 **Salimcan Akyürek**, ***Master of Science in Chemistry***, Dissertation Title *"Novel Glycerol Dry Reforming Catalysts with Monometallic and Bimetallic Active Sites".*

22. 2021 **Seyedsaber Hosseini**, ***Master of Science in Chemistry***, Dissertation Title *"Highly-Dispersed Iridium Catalysts With Sub-Nanometer Diameters For Carbon Monoxide Oxidation".*

23. 2022 **Merve Kurt**, ***Ph.D. in Chemistry*,** Dissertation Title *"Exothermic Catalytic Decomposition of Energetic Ionic Liquids on Ir Based Catalysts"*

24. 2022 **Kerem Emre Ercan**, ***Ph.D. in Chemistry***, Dissertation Title *"N-O Activation On Precious Metal-Free Metal Oxide Based Nox Removal Systems".*

25. 2022 **Arca Anıl**, ***Master of Science in Chemistry***, Dissertation Title *"CO_2 Activation On MnOx/Pd(111) Model Catalyst".*

DISSERTATIONS SUPERVISED (continued):

26. 2023 **Zelal Yavuz**, ***Ph.D. in Material Science and Nanotechnology***, Dissertation Title *"The Investigation of Advanced Thermoplastic Composite Materials In Aerospace Applications".*

27. 2023 **Ahmet Arda Türk**, ***Master of Science in Chemistry***, Dissertation Title *"Utilization of Ethanol to Enhance Photocatalytic NO_x Oxidation and Storage on TiO_2".*

28. 2023 **Ömer Faruk Sadak**, ***Master of Science in Chemistry***, Dissertation Title *"Towards Understanding The Catalytic Bond-Breaking Sequences Of Polyol Oxidation On Pd(111) Single Crystal Model Catalysts".*

29. 2024 **Beyzanur Erdivan**, ***Master of Science in Chemistry***, Dissertation Title *"Bimetallic Hydroxide Catalysts For Aerobic C-H Activation".*

SUPERVISED RESEARCH PROJECTS:

1. 2006-2011 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 105Y260**

2. 2007-2010 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 107Y115**

3. 2008 TUBITAK BIDEB SCIENTIFIC CONFERENCE SUPPORT PROJECT: **Principal Investigator**

4. 2009-2011 TUBITAK-RFBR (RUSSIA) BILATERAL RESEARCH PROJECT: **Principal Investigator 108M379**

5. 2011-2013 TUBITAK-GSRT (GREECE) BILATERAL RESEARCH PROJECT: **Principal Investigator 109M713**

6. 2011-2013 GENERAL MOTORS COMPANY RESEARCH PROJECT: **Principal Investigator**

7. 2012-2014 TUBITAK-RFBR (RUSSIA) BILATERAL RESEARCH PROJECT: **Principal Investigator 111M780**

8. 2012-2015 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 112T589**

9. 2014-2015 TUBITAK-NSF (USA) RESEARCH PROJECT: **Principal Investigator 113Z543**

10. 2014-2015 TUBITAK BIDEB INTERNATIONAL POSTDOCTORAL RESEARCHER PROJECT: **Principal Investigator**

11. 2014-2016 TUBITAK-CNR (ITALY) RESEARCH PROJECT: **Principal Investigator 213M585**

12. 2015 TUBITAK 1002 RESEARCH PROJECT: **Principal Investigator 115Z135**

13. 2015-2017 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 115Z552**

14. 2016-2016 ROKETSAN COMPANY RESEARCH PROJECT: **Principal Investigator**

15. 2016-2018 TUBITAK-BAS (BULGARIA) RESEARCH PROJECT: **Principal Investigator 215M170**

16. 2017-2019 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 116M435**

17. 2017-2019 ROKETSAN COMPANY RESEARCH PROJECT: **Principal Investigator**

18. 2019-2022 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 119M058**

19. 2019-2021 TUBITAK 2236 RESEARCH PROJECT: **Principal Investigator 119C014**

20. 2020-2024 TURKISH PRESIDENTIAL STRATEGY AND BUDGET OFFICE TENMAK-TXPES PROJECT: **Researcher**

21. 2021-2024 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 121Z472**

22. 2021-2023 ASELSAN COMPANY RESEARCH PROJECT: **Researcher**

23. 2023-2026 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 122N441**

24. 2023-2026 TUBITAK 1001 RESEARCH PROJECT: **Principal Investigator 123Z419**

TEACHING EXPERIENCE:

2001 Chem 326: Physical Chemistry Laboratory (Texas A&M University)
(Instructed various physical/electro-chemical experiments to junior/senior level chemistry students)

2000-2001 Chem 101: Fundamentals in Chemistry I (Texas A&M University)
(Instructed first year chemistry experiments/recitation and problem solving sessions to freshmen and sophomores.)

2006 Chem 545: Nanotechnology and Its Applications (Washington State University)
(Instructed by multiple instructors. For senior/graduate level chemistry, physics, biology, material science, chemical engineering and electronic engineering students)

2006- Chem 102: General Chemistry II (Bilkent University)
(Instructed first year chemistry lectures, to freshmen and sophomores.)

2006- Chem 101: General Chemistry I (Bilkent University)
(Instructed first year chemistry lectures to freshmen and sophomores.)

2006-2010 Chem 100: Principles of Chemistry I (Bilkent University)
(Instructed first year chemistry lectures to freshmen and sophomores.)

2008 - CHEM 551: Special Topics in Physical Chemistry (Bilkent University)
(Instructed M.S. and Ph. D. students)

2009- CHEM 323: Physical Chemistry I (Bilkent University)
(Instructed Junior and Senior undergraduate students)

2011- CHEM 324: Physical Chemistry II (Bilkent University)
(Instructed Junior and Senior undergraduate students)

2014- TUBITAK High School Chemistry Olympics National Team Lecturer

2014- GE 500 Graduate Education Lecturer: "Excellence in Teaching"
(Instructed M.S. and Ph. D. students)

2019- Chem 521 Surface Chemistry (Bilkent University)
(Instructed M.S. and Ph. D. students)

2020- Chem 200 World of Atoms and Molecules (Bilkent University)
(Instructed sophomore, junior and senior undergraduate students)

INTERNSHIPS:

1998 DYO Paint and Dye Manufacturing Inc. , Product Development and Quality Control Labs. , Izmir, Turkey

EXTRACURRICULAR ACTIVITIES:

2006-2007 Academic Consultant and project supervisor for the "Hidromobilkent" undergraduate project team to construct a **hydrogen-fueled passenger vehicle** for the **"Hidromobil 2007"** competition organized by the Scientific and Technical Research Council of Turkey (TUBITAK)

2012 "**2012 Bilkent Chemistry Summer Camp for High School Students".** Organized a 3-day workshop for high school students involving theoretical lectures, lab demonstrations and hands-on experiments (c.a. 40 attendees)
Related experiment videos can be found at: *https://www.youtube.com/playlist?list=PL2E84225BE99D83BD*

2016 "**2016 Bilkent Chemistry Days for High School Students: Chemistry in Action !".** Organized a 2-day workshop for high school students involving theoretical lectures, lab demonstrations and hands-on experiments (c.a. 30 attendees)

PRESS APPEARANCES:

2019 **Nature (Asia):** "SESAME's first publication sees light"
https://www.natureasia.com/en/nmiddleeast/article/10.1038/nmiddleeast.2019.90

2019 **Lightsources.org:** "Publication of the first scientific paper of SESAME"
https://lightsources.org/2019/06/19/publication-of-the-first-scientific-paper/

2020 **WIRED Magazine:** "This 133-meter accelerator ring in Jordan propels particles—and peace"
https://wired.me/science/this-133-meter-jordan-accelerator-ring-propels-particles-and-peace/

2022 **AZO MAterials Magazine:** "Identifying Sulfur Poisoning with Near-Field Infrared Spectroscopy"
https://www.azom.com/article.aspx?ArticleID=21662