CURRICULUM VITAE

Prof. Dr. Ömer Dağ

PERSONAL DATA

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ACADEMIC DEGREES

Prof.	Chemistry-Bilkent University	2007
Assoc. Prof.	Chemistry-Bilkent University	2002
Asst. Prof.	Chemistry-Bilkent University	1998
Ph.D.	Chemistry-Middle East Technical University	1994
M.Sc.	Chemistry-Middle East Technical University	1989
B.Sc.	Chemistry-Middle East Technical University	1986

EMPLOYMENT HISTORY

04/07-Present	Full Professor, Bilkent University, Department of Chemistry
06/15-09/16	Acting Chairman, Bilkent University, Department of Chemistry
09/10-09/11	Visiting Professor, University of Toronto, Department of Chemistry
04/09-06/10	Chairman, Bilkent University, Department of Chemistry
09/07-04/09	Acting Chairman, Bilkent University, Department of Chemistry
09/00-09/07	Assistant Chairman, Bilkent University, Department of Chemistry
01/02-04/07	Assoc. Prof., Bilkent University, Department of Chemistry
12/98-01/02	Asst. Prof., Bilkent University, Department of Chemistry
06/00-08/00	Visiting Professor, University of Toronto, Department of Chemistry
06/99-08/99	Visiting Professor, University of Toronto, Department of Chemistry
05/96-12/98	Post-Doctoral Fellow, University of Toronto, Department of Chemistry
06/94-09/94	Post-Doctoral Fellow, University of Toronto, Department of Chemistry
01/94-11/94	Research Assistant, Middle East Technical University, Department of Chemistry
09/91-01/94	Research Assistant, University of Toronto, Department of Chemistry
09/86-05/96	Teaching Asssitant, Middle East Technical University, Department of Chemistry.

PROFESSIONAL AWARDS

1. Ph.D. Scholarship Award of Scientific and Technical Research Council of Turkey (TÜBİTAK)/Turkey (for 1 year), 1991.
2. Canadian Space Agency Certificate of Achievement for Successful Microgravity Materials Science Space Shuttle Flight Endeaver STS-77,1996.
3. TÜBİTAK Encouragement Price, 2001.

4. Turkish Academy of Science (TÜBA) Young Scientist Award, 2002.

MEMBERSHIP

1. American Chemical Society (1999-Present).
2. International Mesostructured Materials Association (IMMA) (2004-present).
3. Materials Research Society of Singapore (2005-present).
4. Turkish Academy of Science (Associate Member, 2006-2011).
5. Academy of Science Association Istanbul (Associate Member, 2012-2012).
6. Academy of Science Association Istanbul (Member, 2012-Present).

TEACHING

1. Graduate Courses:
   - Chem 504 Group Theory and Its Chemical Application
   - Chem 541 Advanced Inorganic Chemistry I
   - Chem 542 Advanced Inorganic Chemistry II
2. Undergraduate Courses:
   - Chem 211 Analytical Chemistry I
   - Chem 212 Anlaytical Chemistry II
   - Chem 341 Inorganic Chemistry I
   - Chem 342 Inorganic Chemistry II
   - Chem 101 General Chemistry I
   - Chem 102 General Chemistry II
3. Independent Study Supervised:
   - Chem 491 Senior Project I
   - Chem 492 Senior Project II

GRADUATE STUDENT SUPERVISION

1. Olga Samarskaya, M.Sc., "Silver nitrate-Oligo (etyhlene oxide) surfactant mesoporous Nanocomposite Films and Monoliths", 12/98 – 9/00.
2. Özgür Çelik, M.Sc., "A New Lyotropic Liquid Crystalline Phase of Non-Ionic Surfactants and The Synthesis of Mesoporous Metal Sulphides", 09/99 – 7/01.
3. A. Faik Demirörs, M. Sc., "Effects of Some Transition Metal Salts on the Synthesis of Mesoporous Silica", 09/03-07/05.
4. Yaşar Akdoğan, M.Sc., "Synthesis and Characterization of CdS, ZnS and $Zn_{1-x}Cd_xS$ Nanoparticles in Mesostructured Silica Materials", 09/04-01/06.
5. Olga Samarskaya, **Ph.D.**, "Synthesis and Characterization of Mesoporous Transition Metal Ion Modified Silica-Zirconia and Silica-Sulfated Zirconia Materials Towards NOx Catalysis", 9/00 – 09/06.
6. Yurdanur Türker, M. Sc., "Lyotropic Liquid Crystalline Mesophases of Salt:Pluronic Systems for Synthesis of Mesostructured Materials", 09/05-07/07.
7. Cemal Albayrak, M. Sc., "Investigation of two New Lyotropic Liquid Crystalline Systems: $[Zn(H_2O)_6](NO_3)_2$-$C_{12}EO_{10}$-CTAB-H_2O and $[Zn(H_2O)_6](NO_3)_2$-$C_{12}EO_{10}$-CTAB-H_2O" 09/06-07/08.
8. Yurdanur Türker, **Ph.D.**, "Lyotropic Liquid Crystalline Mesophases of Salt:Pluronic Systems for Synthesis of Mesostructured Materials", 09/07-01/12.
9. Altuğ S. Poyraz, M. Sc., "Morhology Control and Surface Modification of Mesoporous Silica Materials" 09/07-07/09.
10. Halil İ. Okur, M. Sc. "The Phase Behaviour and Synthesis of Mesostructured Coupled Semiconductor Thin Films: Meso-CdS-TiO_2" 09/07-07/09.

11. Mustafa Sayın, M. Sc. “Synthesis of Mesoporous Silica Using Anionic-Pluronic Couple” 09/08-07/10.
12. Cuneyt Karakaya, M. Sc. “Synthesis of Mesoporous Metal Oxides Silica Thin Films and Metal Oxide Nanotubes” 09/09-01/12.
13. Cemal Albayrak, **Ph.D.,** “Investigation of Salt-Surfactant Mesophases and Its Application of Materials Synthesis” 09/08-01/13.
14. Gözde Barın, M. Sc. “Investigation of Lithium Salt-Nonionic Surfactant Mesophases and Its Applications in Solar Cells as Gel Electrolytes” 09/11-07/13.
15. Ahmet Selim Han, M. Sc. “Quantum Dot Sensitized Mesoporous Titania Thin Films; Synthesis and Characterization of Mesoporous Metal Titanates and Metal Chalcogenite Titania Films” 09/12-05/15.
16. Civan Avcı, M. Sc. “Synthesis of Transparent Mesoporous Metal Titanetes Through Molten Salt Assisted Self-Assembly (MASA) Approach” 09/12-07/15
17. Ebrima Tunkara, M. Sc. “Highly Proton Conducting Phosphoric Acid-Nonionic Surfactant Lyotropic Liquid Crystalline Mesophases and Synthesis of Highly Transparent Mesoporous Calcium Hydroxyapatite Thin Film” 09/12-07/15.
18. Ezgi Yılmaz M. Sc. “Investigation of Lithium Salts-Nonionic Surfactant Lyotropic Liquid Crystalline Mesophases in a Dye Sensitized Solar Cell as Gel Electrolytes” 09/13-09/15
19. Gülbahar Saat M. Sc. “Synthesis and Characterization of Mesoporous $LiCoO_2$ and $LiMn_2O_4$ Thin Films” 09/14-01/17.
20. Muammer Y. Yaman M. Sc. “Quantum Dot Sensitized Solar Cell: A New Synthetic Approach” 09/15-09/17.
21. Zeynep Tuna M. Sc. “Synthesis and Characterization of Large Mesoporous $CdTiO_3$ and CdSe-TiO_2 Thin Films”02/15-01/18.
22. Tuluhan Çolak M. Sc. “Synthesis and Characterization of Porous Lithium Metal Phosphates” 09/15-03/18.
23. Nüveyre Canbolat M. Sc. “Synthesis of Porous Ag_3PO_4 as an Efficient Photocatalyst” 02/16-07/18.
24. Ezgi Yılmaz Topuzlu **, Ph.D.** “Lyotropic Liquid Crystalline Mesophases as Gel Electrolytes in DSSCs” 09/15-09/2020.
25. Assel Amirzhanova M. Sc. “Synthesis and Characterization of Mesoporous NiO and NiO-TiO_2 as a Electromic Electrode” 02/2017-09/2019.
26. Işıl Uzunok M. Sc. “Synthesis of Mesoporous Lithium Metal Phosphates through Lyotropic Liquid Crystalline Mesophases” 09/2017-09/2019.
27. Irmak Karakaya M. Sc. “Fabrication of Mesoporous Metal Oxides Electrodes as Water Oxidation Electrocatalysts” 09/2017-09/2019.
28. Nesisbe Akmanşen M. Sc. “Synthesis and Characterization of Mesoporous ZnO and $ZnCo_2O_4$ Thin Films” 02/2019-2021.
29. Assel Amirzhanova **Ph.D.** “Synthesis, Characterization, and Electrochemical Properties of Mesoporous MCo_2O_4 (M = Mn, Fe, Ni, Cu, and Zn) Thin Films” 09/2019-present.
30. Işıl Ulu **Ph.D.** “Acid-Salt-Surfactant Lyotropic Liquid Crystalline Mesophases: Synthesis, Characterization, and Electrochemical Properties of Mesoporous $M_2P_2O_7$ and $M_{2-x}M'_xP_2O_7$ (Mn, Co, and Ni, M’ = Mn, Co, and Ni) Powders and Films” 09/2019-10/2023.
31. Irmak Karakaya **Ph.D.** “Synthesis, Characterization and Electrochemical Properties of Mesoporous $LiM_{2-x}M^*_xO_4$ Thin Films (M: Mn, Fe and M*: Mn, Co, Fe, Ni **)**” 09/2019-present.
32. Hamid A. Raza M. Sc. “Synthesis, Characterization, and Electrochemical Application of Mesoporous Calcium Iron Oxide ($CaFe_2O_4$) Thin Films” 02/2021-06/2023.
33. Najeeb Ullah M. Sc. “Role of Silica in the Self-assembly of Salt-surfactantant Mesophases and Synthesis of Mesoporous Metal Oxides” 09/2021-07/2023.

34. Arda Altan M. Sc. “Role of Alcohols on the Synthesis of Mesoporous $LiMPO_4$ (M = Mn, Co, and Ni) Thin Films and their Electrochemical Properties” 09/2023-present.
35. Gözde Ceran M. Sc. “Role of Alcohols on the Synthesis of Mesoporous $M_2P_2O_7$ (M = Mn, Co, and Ni) Thin Films and their Electrochemical Properties” 09/2023-present.
36. Muratcan Ös M. Sc. “Mesoporous MgM_2O_4 Thin Films and their Electrochemical Properties” 09/2024-present.
37.

PATENTS

“Fast Luminescent Silicon” U.S.A. US Patent No. 6,027,666, February, 2000, Geoffrey A. Ozin, Ömer Dag, Hong Yang.

SCHOLARLY PUBLICATIONS

Ph.D. Dissertation: Synthesis and Characterization of A Novel Form of Luminescent Silicon, 07/94. Middle East Technical University. Note: Research was conducted at University of Toronto, Toronto, Canada, under the supervision of Prof. Dr. Geoffrey A. Ozin between 1991 and 1994.

Articles in Refereed Journals

86. “Nanoarchitectonic Mesoporous $Ni_{1-x}Mn_xO$ Electrodes: Charge Capacity and Oxygen Evolution Reaction Electrocatalysis in Alkaline Media” Katırcı A. A., Durukan K. I., **Dag, Ö.** *ACS Appl. Energy Mater.* **2025**, 8, 3162-3177.

85. “Non-ionic Surfactant Self-assembly in Calcium Nitrate Tetrahydrate and Related Salts” *Soft Matter* **2025**, 21, 1323-1332. Zahid, Y., Li, Y., **Dag, Ö**., Warr, G., Albayrak, C.

84. “Electronic Synergistic Effects on the Stability and Oxygen Evolution Reaction Efficiency of the Mesoporous $LiMn_{2-x}M_xO_4$ (M = Mn, Fe, Co, Ni, and Cu) Electrodes” Durukan Karakaya, I., **Dag, Ö. Inorganic Chemistry 2024**, 62, 22239-22257.

83. “Transition Metal salt Catalysized Green Synthesis of Mesoporous Slica Nanoparticles” *Microporous Mesoporous Materials* **2024**, 378, 113233 (1-9). Amirzhanova A., Ullah, N., **Dag, Ö.**

82. “Manganese Oxide-based Mesoporous Thin Film Electrodes: Manganese Disproportionation Reaction in Alkaline Media” *Jurnal of Materials Chemistry A.* **2024**, 12, 6359-6375. Durukan, I. K., Ulu, I., **Dag, Ö.**

81. “Molten Salt Assisted Assembly (MASA) of novel mesoporous $Ni_{0.5}Mn_{0.5}Co_2O_4$ for high-performance asymmetric supercapacitors” *Electrochemistry Communications* **2024**, 168, 107811.Ozkaynak, M. U., Türker, Y., Donmez, K. B., Daglar, S., Çobandede, Z., Çelenk, M. M., Karatepe, N., Güner, F. S., **Dag Ö.**

80. “Understanding the Role of Water in the Lyotropic Liquid Crystalline Mesophase of High-performance Flexiable Supercapacitor Electrolytes Using Rheological Approach” *Journal of Molecular Liquids* **2024**, 394, 123705 (1-13). Ozkaynak, M. U., Kocaaga, B., Donmez, K. B., Daglar, S., Turker, Y., Karatepe, N., Guner, S. F, **Dag, Ö.**

79. "Nanoarchitectonics of Mesoporous $M_2P_2O_7$ (M = Mn(II), Co(II), and Ni(II)) and $M_{2-x}Co_xP_2O_7$ and Transformation to Their Metal Hydroxides with Decent Charge Capacity in Alkali Media" *Inorg. Chem.* **2023**, 62, 16994-17011. Ulu, I., Ulgut, B., **Dag, Ö.**

78. "Nanoarchitectonics of Mesoporous $CaFe_2O_4$ Thin-Film Electrodes from Salt-Surfactant Lyotropic Liquid Crystalline Mesophases and Their OER Performance" *ACS Appl. Energy Mater.* **2023**, 6, 9681-9697. Raza, H. A., Karakaya, I., **Dag, Ö.**

77. "Fabrication of Mesoporous Nickel Pyrophosphate Electrodes and Their Transformation to Nickel Hydroxide with Decent Capacitance in Alkaline Media" *J. Mater. Chem. A* **2023**, DOI 10.1039/D3TA05578G. Ulu, I., Ulgut, B., **Dag, Ö.**

76. "Lyotropic Liquid Crystalline Mesophases of Lithium Dihydrogen Phosphate and 10-Lauryl Ether Stabilized with Water or Phosphoric Acid" *ChemPlusChem* **2023**, 88, e202200447. Topuzlu, E. Y., Ulgut, B., **Dag, Ö.**

75. "Symmetry-breaking Plasmonic Mesoporous Gold Nanoparticles with Large Pores" *Chem. Mater.* **2022**, 34, 7256-7270 Nugraha, A.S., Guselnikova, O., Henzie, J., Na, J. Hossain, M. S. A., **Dag, Ö.**, Rowan, A. E., Yamauchi, Y.

74. "Role of Water in the Lyotropic Liquid Crystalline Lithium Iodide-Iodine-Water-$C_{12}E_{10}$ Mesophase as a Gel-Electrolyte in Dye Sensitized Solar Cell" *Langmuir* **2021**, 37, 8305-8313. Topuzlu, E. Y., Ulgut, B., **Dag, Ö.**

73. "Mesoporous $MnCo_2O_4$, $NiCo_2O_4$, and $ZnCo_2O_4$ Thin Film Electrodes as Electrocatalysts for Oxygen Evolution Reaction in Alkaline Solutions" *ACS Appl. Energy Mater.* **2021**, 4, 2769-2785. Amirzhanova, A., Akmanşen, N., Karakaya, I., **Dag, Ö**.

72. "Electrochemical Synthesis of Mesoporous Architectured Ru Films Using Supramolecular Templates" *Small* **2020**,16, 2002489(1-9). Kani, K., Henzie, J., **Dag, Ö.**, Wood, K., Iqbal, M., Lim, H., Jiang, B., Salomon, C., Rowan, A. E., Hossain, Md. S. A., Na, J., Yamauchi, Y.

71. "Modification of Mesoporous $LiMn_2O_4$ and $LiMn_{2-x}Co_xO_4$ by SILAR Method for Highly Efficient Water Oxidation Electrocatalysis" *Adv. Mater. Tech.* **2020**, 5, 2000353(1-12). I. Karakaya, C. F. Karadas, B. Ülgüt, **Dag, Ö.**

70. "Synthesis and Water Oxidation Electrocatalytic and Electrochromic Behaviours of Mesoporous Nickel Oxide Thin Film Electrodes" *J. Mater. Chem. A* **2019**, 7, 22012-22020. A. Amirzhanova, I. Karakaya, C. B. Uzundal, G. Karaoğlu, F. Karadas, B. Ülgüt, **Dag, Ö.**

69. "Lyotropic Liquid Crystalline Mesophases Made of Salt-Acid-Surfactant Systems for the Synthesis of Novel Mesoporous Lithium Metal Phosphates" *ChemPlusChem* **2019**, 84, 1544-1553. Uzunok, I.; Kim, J.; Çolak, T. O.; Kim, D. S.; Kim, H.; Kim, M.; Yamauchi, Y.; **Dag, Ö.**

68. "Standing Mesochannels: Mesoporous PdCu Films with Vertically-Aligned Mesochannels from Nonionic Micellar Solutions" *ACS Appl. Mater. Interfaces* **2018**, 10, 40623-40630. Iqbal, M.; Jiang, B.; Li, C.; **Dag, Ö.**; Malgras, V.; Kim, J.; Yamauchi, Y.

67. "Two-Dimensional Mesoporous Vanadium Phosphate Nanosheets Through Liquid Crystal Templating Method Towards Supercapacitor Application" *Nano Energy* **2018**, 52, 336-344. Mei, P.; Kaneti, Y.; Pramanik, M.; Takei, T.; **Dag, Ö.**; Sugahara, Y.; Yamauchi, Y.

66. "Electrochemical Deposition of Large-Sized Mesoporous Nickel Films Using Polymeric Micelles" *Chem. Commun.* **2018**, 54, 10347-10350. Baba, D.; Li, C.; Henzie, J.; Jiang, B.; Kim, J.; **Dag, Ö.**; Yamauchi, Y.; Asahi, T.

65. "Synthesis of Mesoporous $LiMn_2O_4$ and $LiMn_{2-x}Co_xO_4$ Thin Films Using MASA Approach as Efficient Water Oxidation Catalysts" *J. Mater. Chem. A*, **2018**, 6, 13925-13933. Balci, F. M.; Karakaya, I.; Alsaç, E. P.; Saat, G.: Yaman, M. Y.; Karadas, F.; Ulgut, B.; **Dag, Ö.**

64. "Molten Salt Assisted Self-Assembly: Synthesis of Mesoporous $LiCoO_2$ and $LiMn_2O_4$ Thin Films and Investigation of Electrocatalytic Water Oxidation Performance of Lithium Cobaltate" *Small* **2018,** 14, 1701913 (1-11). Saat, G.; Balci, F. M.; Alsaç, E. P.; Karadas, F.; **Dag, Ö.**

63. "Modifying Titania Using Molten Salt Assisted Self-Assembly Process for Cadmium Selenide Quantum Dot-Sensitized Photoanodes" *ACS Omega* **2017**, 2, 4982-4990. Yaman, M. Y.; Han, A. S.; Bandara, J.; Karakaya, C.; **Dag, Ö.**

62. "Lyotropic Liquid Crystalline Mesophases of Sulfuric Acid-Non-Ionic Surfactant Stabilizes Lead(II) Oxide in Sulfuric Acid Concentrations Relevant to Lead Acid Batteries" *ACS Omega* **2017**, 2, 3785-3791. Uzundal, C. B.; Balci, F. M.; Ulgut, B.; **Dag, Ö.**

61. "Continuous Mesoporous Pd Films by Electrochemical Deposition in Nonionic Micellar Solution" *Chem. Mater.* **2017,** 29, 6405-6413. Iqbal, M.; Li, C.; Wood, K.; Jiang, B.; Takei, T.; **Dag, Ö.**; Baba, D.; Nugraha, A. S.; Asahi, T.; Whitten, A. E.; Hossain, M. S. A.; Malgras, V.; Yamauchi, Y.

60. "Lyotropic Liquid Crystalline Mesophase of Lithium Triflate-Non-Ionic Surfactant as Gel-Electrolyte for Graphene Optical Modulator" *J. Phys. Chem. C* **2017**, *121*, 11194-111200. Balci F. M.; Balci, S.; Kocabas, C.; **Dag, Ö.**

59. "Mesoporous Metallic Rhodium Nanoparticles" *Nature Commun.* **2017,** 8, 15581. Jiang, B.; Li, C.; **Dag, Ö.**; Abe, H.; Takei, T.; Imai, T.; Hossain, S. A.; Wood, K.; Henzie, J. and Yamauchi, Y.

58. "Synthesis of Mesoporous Lithium Titanate Thin Films and Monoliths as an Anode Material for High Rate Lithium Ion-Batteries" *Chem. Eur. J.* **2016**, 22, 18873-18880. Balcı, F. M.; Kudu, U. Ö.; Yılmaz, E.; **Dag, Ö.**

57. "Lithium Salt-Nonionic Surfactant Lyotropic Liquid Crystalline Gel-Electrolytes with Redox Couple for Dye Sensitized Solar Cells" *RSC Advances*, **2016**, 6, 97430-97437. Yılmaz, E.; Olutas, E. B.; Barım, G.; Bandara, J.; **Dag, Ö.**

56. "First Synthesis of Continuous Mesoporous Copper Films with Uniformly Sized Pores by Electrochemical Soft Templating" *Angew. Chem., Inter. Ed.* **2016**, 55, 12746-12750.

Li,C.; Jiang, B.; Wang, Z.; Li, Y.; Hossain, M.; Shahriar, A.; Kim, J. H.; Takei, T.; Henzie, J.; **Dag, Ö.**; Bando, Y.; Yamauchi, Y.

55. "Salt-Acid-Surfactant Lyotropic Liquid Crystalline Mesophases: Synthesis of Highly Transparent Mesoporous Calcium Hydroxyapatite Thin Films" *Eur. J. Inorg. Chem.* **2016**, 2014-2021. Tunkara, E.; **Dag, Ö.**

54. "Strong Acid–Nonionic Surfactant Lyotropic Liquid-Crystalline Mesophases as Media for the Synthesis of Carbon Quantum Dots and Highly Proton Conducting Mesostructured Silica Thin Films and Monoliths" *Langmuir* **2015**, 31, 10265-10271. Olutaş, E. B.; Balcı, F. M.; **Dag, Ö.**

53. "Electrochemical Synthesis of Mesoporous Au Films toward Mesospace-Stimulated Optical Properties" *Nature Communication* **2015** in press (6, Artıcle Number: 6608 doi: 10.1038/ncomms7608) Li, C.; **Dag, Ö.**; Dao, T. D.; Nagao, T.; Sakamoto, Y.; Kimura, T.; Terasaki, O.; Yamauchi, Y.

52. "Highly Proton Conducting Phosphoric Acid-Nonionic Surfactant Lyotropic Liquid Crystalline Mesophases"*ACS Nano.* **2014**, 8, 11007-11012. Tunkara, E.; Albayrak, C.; Polat, E. O.; Kocabas, C.; **Dag, Ö.**

51. "Molten Salt Assisted Self Assembly (MASA): Synthesis of Mesoporous Metal Titanate ($CoTiO_3$, $MnTiO_3$, and $Li_4Ti_5O_{12}$) Thin Films and Monoliths" *Chem. Mater.* **2014**, 26, 6050-6057. Avcı, C.; Aydin, A.; Tuna, Z.; Yavuz, Z.; Yamauchi, Y.; Suzuki, N.; **Dag, Ö.**

50. "Effect of Hygroscopicity of the Metal Salt on the Formation and Air Stability of Lyotropic Liquid Crystalline Mesophases in (Hydrated Salt)-Surfactant Systems" submitted to *J. Colloid Interface Sci.* **2014,** 433, 26-33. Albayrak, C.; Barım, G.; **Dag, Ö.**

49. "Highly Conducting Hydrated Lithium Salts-Pluronics Lyotropic Liquid Crystalline Mesophases" *Langmuir* **2014**, 30, 6938-6945. Barım, G.; Albayrak, C.; Yılmaz, E.; **Dag, Ö.**

48. "Lyotropic Liquid Crystal to Soft Mesocrystal Transformation in Hydrated Salt–Surfactant Mixtures" *Chem. Eur. J.* **2013**, 19, 15026-15035. Albayrak, C.; Barım, G.; **Dag, Ö.**

47. "Molten-Salt-Assisted Self-Assembly (MASA)-Synthesis of Mesoporous Metal Titanate-Titania, Metal Sulfi de-Titania, and Metal Selenide-Titania Thin Films" *Adv. Funct. Mater.* **2013**, 23, 4002-4010. Karakaya, C.; Türker, Y.; **Dag, Ö.**

46. "From Bare Metal Powders to Colloidally Stable TCO Dispersions and Transparent Nanoporous Conducting Metal Oxide Thin Films" *Small* **2012**, 8, 3806-3809. Redel, E.; Huai, C.; **Dag, Ö.**; Petrov, S.; O'Brien, P. G.; Helander, M. G.; Mlynarski, J.; Ozin, G. A.

45. "Assembly of Photoluminescent Silicon-Nanocrystals into Periodic Mesoporous Organosilica" *J. Am. Chem. Soc.* **2012**, *134*, 8439-8446. Guan, M.; Wang, W.; Henderson, E.J.; **Dag, Ö.**; Kübel, C.; Chakravadhanula, V. S. K.; Rinck, J.; Moudrakovski, I. L.; Thomson, J.; McDowell, J.; Powell, A.; Zhang, H.; Ozin, G. A.

44.. “A Highly Conductive Lithium Salts-Non-Ionic Surfactants Lyotropic Liquid Crystalline Mesophases and Its Application” *Chem. Eur. J.* **2012**, *18*, 4190-4193. Albayrak, C.; Cihaner, A.; **Dag, Ö. (Inside Cover).**

43. “Fabrication of Mesoporous Metal Chalcogenide Nanoflake-Silica Thin Films and Spongy Mesoporous CdS and CdSe” *Chem. Eur. J.* **2012**, *18*, 3695-3705. Türker, Y.; Karakaya, C.; **Dag, Ö.**

42. “Synthesis of Nanoamorphous Germanium and its Transition to Nanocrystalline Germanium” *Small* **2012**, *8*, 921-929. **Dag Ö**.; Henderson, E. J. Ozin, G. A.

41. “Green Nanochemistry: Metal Oxide Nanoparticles and Porous Thin Films from Bare Metal Powders” *Small* **2012**, *8*, 68-72, Redel, E.; Petrov, S.; **Dag, Ö.**; Moir, J.; Huai, C.; Mirtchev, P.; Ozin, G. A.

40. “Spatially Confined Redox Chemistry in Periodic Mesoporous Hydridosilica - Nano Silver Grown in Reducing Nanopores” *J. Am. Chem. Soc.* **2011**, *133*, 17454-17462. **Dag, Ö.** Henderson, E. J.; Wang, W.; Lofgreen, J. E.; Petrov, S.; Brodersen, P. M.; Ozin, G. A.

39. “Assembly of Molten Transition Metal Salt-Surfactant in a Confined Space for the Synthesis of Mesoporous Metal Oxide Rich Metal Oxide-Silica Thin Films” *Chem. Mater.* **2011**, *23*, 3062-3071. Karakaya,C.; Türker, Y.; Albayrak, C.; **Dag, Ö.**

38. “Periodic Mesoporous Hydridosilica – Synthesis of an “Impossible” Material and its Thermal Transformation into Brightly Photoluminescent Periodic Mesoporous Nanocrystal Silicon-Silica Composite” *J. Am. Chem. Soc.* **2011**, *133*, 5094-5102. Xie, Z.; Henderson, E. J.; **Dag, Ö**.; Wang, W.; Lofgreen, J. E.; Kübel, C.; Scherer, T. Brodersen, P. M.; Gu, Z. Z.; Ozin, G. A.

37. “Origin of Lyotropic Liquid Crystalline Mesophase Formation and Liquid Crystalline to Mesostructured Solid Transformation in the Metal Nitrate Salt-Surfactant Systems” *Langmuir* **2011**, *27*, 870. Albayrak, C.; Özkan, N.; **Dag, Ö.**

36. “Synthesis of Stable Mesostructured Coupled Semiconductor Films: meso-CdS-TiO_2 and meso-CdSe-TiO_2 ” *Langmuir* **2010**, *26*, 538 . Okur, H. I.; Türker, Y.; **Dag, Ö.**

35. “The Role of Charged Surfactants in the Thermal and Structural Properties of Lyotropic Liquid Crystalline Mesophases of $[Zn(H_2O)_6](NO_3)_2$-C_nEO_m-H_2O” *J. Colloid Interface Sci.* **2010**, *341*, 109. Albayrak, C.; Soylu, A. M.; **Dag Ö.**

34. “The Role of Organic and Inorganic Additives on the Assembly of CTAB-P123 and the Morphology of Mesoporous Silica Particles” *J. Phys. Chem. C* **2009**, *113*, 18596. Poyraz, A. S.; **Dag, Ö.**

33. “Lyotropic Liquid Crystalline Mesophases of $[Zn(H_2O)_6](NO_3)_2$-$C_{12}EO_{10}$-CTAB-H_2O and $[Zn(H_2O)_6](NO_3)_2$-$C_{12}EO_{10}$-SDS-H_2O Systems” *Langmuir* **2008**, *24*, 10592-10595. Albayrak, C.; Soylu, A. M.; **Dag, Ö.**

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PLEANARY LECTURES, INVITED and ORAL PRESENTATIONS

1. "*A New Lyotropic Liquid Crystalline System for the Synthesis of Mesostructured Materials*", 2003, University of Toronto, Toronto, Canada. "On behalf of Prof. Geoffrey A. Ozin's 60th Birthday **(Invited Lecture)**.
2. "*Synthesis and Characterization of Nanostructured/Mesostructured Materials*" Nanoscience Nanotechnology 2005 NanoTR-I Bilkent University, Ankara, Turkey **(Invited Lecture)**.
3. "*Designing Nanostructured/Mesostructured Materials Using Liquid Crystalline Mesophases*" COST NanoChemistry workshop 2005, Koç University, Istanbul, Turkey **(Planery Lecture)**.
4. "*Solid-Solution of $Cd_{1-x}Zn_xS$ Nanocrystals Using Metal Containing Lyotropic Liquid Crystalline Mesophases*" Nanoscience Nanotechnology 2006 NanoTR-II Middle East Technical University, Ankara, Turkey **(Invited Lecture)**.
5. "*Soft Chemistry for the Synthesis of Nano/Mesostructured Materials*" Nanoscience Nanotechnology 2007 NanoTR-III Bilkent University, Ankara, Turkey **(Invited Lecture)**.
6. "Liquid *Crystalline Mesophases of Transition Metal Salts-Surfactant Systems and Mesostructured Materials*" 6th International Mesostructured Materials Symposium-IMMS 2008, Namur, Belgium **(Invited Lecture)**.

7. *"Lyotropic Liquid Crystalline Mesophases of Transition Metal Salts-Surfactant Systems and Mesostructured Materials"* Ö. Dag, Workshop on Nanoelectronics and Nanophotonics, January 2009 ILGAZ, Turkey **(Invited Lecture)**.
8. *"Lyotropic Liquid Crystalline Mesophases of Transition Metal Salts-Surfactant Systems and Mesostructured Materials"* Ö. Dag, 23rd National Chemistry Conference, June 2009 Sivas, Turkey **(Planery Lecture).**
9. *"Lyotropic Mesophases and Nanostructured Materials: Synthesis and Characterization"* C. Karakaya, Y. Turker, C. Albayrak, Ö. Dağ, Nano TR VI, 14-18 June 2010, Izmir **(Invited Lecture)**.
10. "*Kendi Kendine Organize Olan Mezoyapılı ve Nanoyapılı Malzemeler*" Ö. Dağ, 24. National Chemistry Conguress 29 June- 02 July 2010, Zonguldak **(Planery Lecture)**.
11. "*The Fourth Phase of Matter: Liquid Crystals*" Ö. Dağ, Bilkent University Library lectures series, May 2nd 2012, Bilkent University, Ankara, Turkey (Invited, Public Talk on Utube).
12. '*Molten Salt Assisted Self-Assembly: Modification of Mesoporous Silica and Titania Thin Films with Metal Oxides*' C. Albayrak, C. Karakaya, Y. Türker, G. Barım, Ö. Dağ, Third International Conference on Multifunctional, Hybrid and Nanomaterials (Hybrid Materials 2013), 3-7 March 2013, Sorento, Italy.
13. "*Salt-Surfactant Self-Assembly and Fabrication of Mesoporous Thin Films Using MASA Approach*" Ö. Dag, Collaborative Conference on 3D Research (CC3DR), 23-27 June 2014, Seoul, South Korea **(Invited Lecture)**.
14. "*Liyotropik Sıvı Kristaller, Mezoyapılı Malzemeler ve Enerji*" Ö. Dag, 5. Ulusal Anorganik Kimya Kongresi, April 22-25, Mersin, Turkey **(Planery Lecture)**.
15. "*A New Approach for the Fabrication of Highly Transparent Mesoporous Metal Titanate Thin Films and Monoliths*" Ö. Dag, Fourth International Conference on Multifunctional, Hybrid and Nanomaterials (Hybrid Materials 2015), March 9-13, Sitges, Spain.
16. "*Lyotropic Liquid Crystalline Mesophases of Salts and Phosphoric Acid: Mesoporous Metal Phosphate Thin Films*" Ö. Dag, International Conference on Advanced Complex Inorganic Materials (ACIN 2015), July 13-17, 2015, Namur, Belgium.
17. "*A New Approach for the Fabrication of Highly Transparent Mesoporous Metal Titanate Thin Films and Monoliths*" Ö. Dag, Fourth International Conference on Multifunctional, Hybrid and Nanomaterials (Hybrid Materials 2017), March 6-10, Lisbon, Portugal.
18. "*Liyotropik Sıvı Kristal Arafazlar ve Mezogözenekli Malzemelerin Sentezinde Yeni Yaklaşımlar*" Ö. Dag, 29. Ulusal Kimya Kongresi 10-14 Eylül 2017 **(Planery Lecture)**.
19. "*A New Approach for the Fabrication of Highly Transparent Mesoporous Metal Titanate Thin Films and Monoliths*" Ö. Dag, Fourth International Conference on Multifunctional, Hybrid and Nanomaterials (Hybrid Materials 2019), March 6-10, , Spain (oral Presentation).
20. "*Lyotropic Liquid Crystalline Mesophases for the Synthesis of Mesoporous Metal Oxides and Metal Phosphates*" I. Uzunok, I. Karkaya, A. Amirhanova, Ö. Dag, 6th NanoToday, Confgerence, 16-20 June, Lisbon, Portugal (oral Presentation).
21. "*Nanospace Effect in Lyotropic Liquid Crystalline Phase: A Synthesis Platform for Mesoporous Materials*" Ö. Dag, 2019 International Conference on Nanospace Materials (ICNM 2019), 1-4 October 2019, Brisbane, Australia (**Invited lecture**).
22. "*Liyotropik Sıvı Kristal Arafazlar ve Mezogözenekli Malzemelerin Sentezinde Yeni Yaklaşımlar*" 29. Ulusal Kimya Kongresi 10-14 Eylül 2019 (**Planery Lecture**).
23. "*Mesoporous Metal Oxide and Metal Pyrophosphate Thin Film Electrodes: Fabrication and their Electrochemical Properties*" 4th International Conference on Materials Science and Engineering September 26-29, 2023, Nagoya, Japan (**Invited Lecture**).

CURRENT RESEARCH INTEREST(S)

Lyotropic Liquid Crystalline Mesophases. Liquid Crystalline Gel-electrolytes, Synthesis and Characterization of Nanomaterials, and Thin Film Electrodes.