

Özgeçmiş ve Yayın Listesi

Prof. Dr. Nilsun İnce

Nilsun H. Ince

Program Area : Environmental Technology

Address : Bogazici University, Institute of Environmental Sciences, 34342, Bebek, Istanbul, Turkey

E-mail : ince@boun.edu.tr

Telephone : (212) 359-7038

Professional Registration : Prof.

Areas of Interest:

- Physicochemical Processes in Water and Wastewater Treatment
- Ultrasonication as an Advanced Water Treatment Technology
- Advanced Oxidation Processes
- Decontamination of Water from Refractory Micropollutants
- Analysis and Elimination of Emerging Contaminants in Water
- Decolorization of Textile Process Effluents by Advanced Oxidation
- Pre-treatability of Endocrine Disruptors and Pharmaceuticals by Ultrasound-assisted Chemical and Physical Methods
- Synthesis and Use of Metallic Nanoparticles in Water Treatment

Education:

- B.E. in Department of Chemistry, BÜ, 1976
- M.E. in Department of Chemistry, BÜ, 1979
- Ph.D. in Institute of Environmental Sciences, BÜ, 1987

Academic Career:

- Professor, BÜ, Institute of Environmental Sciences, 1997
- Associate Professor, BÜ, Institute of Environmental Sciences, 1991
- Assistant Professor, BÜ, Institute of Environmental Sciences, 1990

Work Experience:

- 1976-1980: Worked in the industry in various sectors
- 1980-1982: Worked in TUBITAK as Researcher in Material Sciences.
- 1982-1985: Worked as a research assistant at BÜ, Institute of Technology and Systems Research
- 1985-1987: Worked as Research Assistant at Bogazici University, Department of Chemical Engineering

- 1987-Present: Faculty Member at BÜ, Institute of Environmental Sciences

Professional Honors, Awards, and Recognitions:

- Araştırmada Üstün Başarı Ödülü, BÜVAK, 2005

Courses Taught:

- ESC 501 Introduction to Environmental Sciences
- ESC 507 New Concepts in Environmental Engineering
- ESC 514 Water Quality Management
- ESC 516 Water and Wastewater Treatment: Physicochemical Processes
- ESC 566 Fundamentals of Environmental Engineering
- ESC 579 Graduate Seminar
- ESC 601 Ph.D. Seminar
- ESC 614 Advanced Technologies for Refractory Matter Removal in Water and Effluent Systems
- ESC 689 Special Topics in Env. Tech: Advanced Oxidation Technologies for Water Pollution Control

Selected Research Projects:

- Pharmaceutical Removal in Drinking Water by Conventional and Advanced Oxidation Processes, BAP, 2012.
- Integration of Advanced Oxidation and Nanoparticle Technologies for Removing Analgesics and Anti-inflammatory Pharmaceuticals, BAP, 2010.
- Assessment of Two Novel Methods: Ultrasound (US) and Nanoparticle Technologies in Remediation of Soil and Groundwater, Project Code : (TUBITAK) 1041130 (2008).
- Pretreatment of Biocide Containing Wastewater by Advanced Oxidation Techniques, BAP, 2008.
- Ultrasonic Pretreatment of Domestic Wastewater Treatment Sludge, BAP and Technical University Hamburg, Department of Sanitary and Environmental Engineering, 2007.
- Optimization of Process Parameters for Ultrasonic Degradation of Endocrine Disruptors in Water, BAP, 2007.
- An Environmental Management Model for Küçükçekmece Basin, TUBITAK-GSRT, 2005.
- Elimination of Micropollutants using Ultrasound and Combined Processes: İÇTAG-Ç098/PIA, 1031049, 2004
- Disinfection with Ultrasound, BÜ Research Fund, 2004
- Chemistry in High Energy Microenvironments: EU COST Action D32
- Atık Otomotiv Yağlama Yağlarının Geri Kazanabilirliğinin İncelenmesi, BÜ Research Fund, 1998
- Tekstil Boya Kazanı Atıksularının İleri Oksidasyon Prosesleri ile

Renksizleştirilmesi ve Hidroksil Radikali Tepkimelerinin Modellenmesi, BÜ Research Fund and DPT, 1998.

- A Battery Approach to Toxicity Assesment of Metals in Binary Solutions, BÜ Research Fund, 1996
- Klor İçeren Zararlı (Tehlikeli) Organiklerin UV Takviyeli Kimyasal Oksidasyonu, Boğaziçi University Research Fund, 1994
- Zararlı Atıkların Zehirlilik Düzeylerinin Fiziksel ve/veya Biyolojik Proseslerle Düşürülmesi, BÜ Research Fund, 1993
- Fenolün Biyolojik Arıtma Sistemlerindeki İnhibisyon Etkisinin İncelenmesi ve Çözüm Önlemlerinin Araştırılması, BÜ Research Fund, 1990
- Organik Kirleticilerin Çevre Sularından Atmosfere Taşınım Hızlarının Tayini, BÜ Research Fund, 1989

Publications:

1. Ziylan A., Ince N.H., Ozonation-based advanced oxidation for pre-treatment of water with residuals of anti-inflammatory medication. *Chemical Engineering Journal* 220 (2013) 151-160.
2. Savun B., Neis U., Ince N.H. Pretreatment of sewage sludge by low-frequency ultrasound, *Journal of Advanced Oxidation Technologies*, 15, 2, 2012.
3. Ersenkal D., Ziylan A., Ince N. H., Acar, HY, Demirer, M , Copty, N.K., 2011: Impact of dilution on the transport of poly(acrylic acid) supported magnetite nano-particles in porous media, *Journal of Contaminant Hydrology*, 126 ,3-4, 248-257.
4. Ziylan A., Ince N.H., 2011: The occurrence and fate of anti-inflammatory and analgesic pharmaceuticals in sewage and fresh water: treatability by conventional and non-conventional processes, *Journal of Hazardous Materials*, 187, 1-3, 24-36.
5. Güyer-Tezcanli G., Ince Nilsun H., 2011: Degradation of diclofenac in water by homogeneous and heterogeneous Sonolysis, *Ultrasonics Sonochemistry*, 18, 1, 114-119.
6. Eren Z., Ince N. H.; Acar F. N., 2010: Degradation of textile dyes, dyebaths and dyeing wastewater by homogeneous and heterogeneous sonophotolysis, *Journal of Advanced Oxidation Technologies*, 13, 2, 206-211.
7. Eren Z., Ince N.H., 2010: Sonolytic and sonocatalytic degradation of azo dyes by low and high frequency ultrasound, *Journal of Hazardous Materials*, 177, 1-3, 1019-1024.
8. Eren Z., Acar F. N., Ince N. H., 2010: Fenton and Fenton-like oxidation of C.I Basic Yellow 51: a comparative study, *Coloration Technology*, 126, 6, 337-34.
9. Ince N.H., Gültekin I., Tezcanlı-Güyer G., 2009: Sonochemical destruction of nonylphenol: effects of pH and hydroxyl radical scavengers, *Journal of Hazardous Materials*, 172, 2-3, 739-743.
10. Gültekin I., Mavrov V., Ince N. H., 2009: Degradation of bisphenol-A by ozonation, *Journal of Advanced Oxidation Technologies*, 12, 2, 242-248.
11. Chand R., Ince N.H.; Gogate P. R., Bremner, D.H., 2009: Phenol degradation using 20, 300 and 520 kHz ultrasonic reactors with hydrogen peroxide, ozone and zero valent metals, *Separation and Purification Technology*, 67, 1, 103-109.

12. Gültekin I., Tezcanli-Güyer G., Ince N. H., 2009: Sonochemical Decay of Cl Acid Orange 8: effects of CCl₄ and t-butyl alcohol, *Ultrasonics Sonochemistry*, **16**, 4, 577-581.
13. Gültekin I., Tezcanli-Güyer G., Ince N. H., 2009: Degradation of 4-n-nonylphenol in water by 20 kHz ultrasound, *Journal of Advanced Oxidation Technologies*, **12**, 105-110.
14. Kıdak R., Ince N. H., 2008: A novel adsorption/saturation approach to ultrasonic degradation of phenol, *Journal of Advanced Oxidation Technologies*, **11**, 3, 583-587.
15. Gültekin I., Ince N.H., 2008: Ultrasonic destruction of bisphenol-A: the operating parameters, *Ultrasonics Sonochemistry*, **15**, 524-529.
16. Gültekin I., Ince N.H., 2007: Synthetic endocrine disruptors in the environment and water remediation by advanced oxidation processes, *Journal of Environmental Management*, **85**, 816-832.
17. Kıdak R., Ince N.H., 2007: Catalysis of advanced oxidation reactions by ultrasound: a case study with phenol, *Journal of Hazardous Materials*, **146**, 630-635.
18. Gültekin I., Ince N.H., 2006: Degradation of aryl-azo-naphthol dyes by ultrasound, ozone and their combination: effect of α -substituents, *Ultrasonics Sonochemistry*, **13**, 208-214.
19. Kıdak R, Ince N.H., 2006: Ultrasonic destruction of phenol and substituted phenols: a review of current research, *Ultrasonics Sonochemistry*, **13**, 190-194.
20. Özen A. S, Aviyente V., Tezcanli-Güyer G, Ince N.H., 2005: Experimental and modeling approach to decolorization of azo dyes by ultrasound: degradation of the hydrazone tautomer, *Journal of Physical Chemistry A*, **109**, 3506.
21. Apikyan G.I., Ince N.H., 2004: Application of electrochemical treatment for effluent reuse in textile industry, *Advances in Color Science & Technology*, **7**, 1, 24.
22. Tezcanli-Güyer G., Ince N.H., 2004: Structure-related degradability of textile dyestuff by acoustic cavitation: a study with dyebath effluents, *Advances in Color Science & Technology*, **7**, 2, 36.
23. Ince NH., Tezcanlı-Güyer G., 2004: Impacts of pH and molecular structure on ultrasonic degradation of azo dyes, *Ultrasonics*, **42**, 591-596.
24. Tezcanlı-Güyer G., Ince N.H., 2004: Individual and combined effects of ultrasound, ozone and UV-irradiation: a case study with textile dyes, *Ultrasonics*, **42**, 603-609.
25. Gültekin I., Ince N.H., 2004: Degradation of reactive azo dyes by UV/H₂O₂: Impact of radical scavengers, *J. Environmental Science and Health, Part A*, **39**, 1069.
26. Tezcanli-Güyer G., Alaton I.A., Ince N.H., 2003: Sonochemical destruction of textile dyestuff in wasted dyebaths, *Coloration Technology*, **119**, 292-296.
27. Tezcanli-Güyer G., Ince N.H., 2003: Degradation and toxicity reduction of textile dyestuff by ultrasound, *Ultrasonics Sonochemistry*, **10**, 235-240.
28. Ince N.H., Hassan D., Üstün B., Tezcanlı G., 2002: Combinative dyebath treatment with activated carbon and UV/H₂O₂: A case study with Everzol Black-GSP[®], *Water Science & Technology*, **46**, 4-5, 51-58.
29. Şenyurt N, Aviyente V, Avcı D., Ince N., 2001: A computational approach to polymerizabilities of diallylamines", *Journal of Molecular Modeling*, **7**, 257-264.

30. Ince N.H. and Tezcanlı G. 2001: Reactive dyestuff degradation by combined sonolysis and ozonation", *Dyes and Pigments*, **49**, 145-153.
31. Ince N.H. and Belen R. 2001: Aqueous phase disinfection with ultrasound: Process kinetics and the effect of solid catalysts, *Environmental Science & Technology*, **35**, 1885-1889.
32. Ince N.H., Tezcanlı G., Belen R. Apikyan I.G. 2001: Ultrasound as a catalyzer of aqueous reaction systems: the state of the art and environmental applications, *Applied Catalysis:B: Environmental*, **29**, 167-176.
33. Ince N. H. and Apikyan I.G., 2000: Combination of activated carbon adsorption and light-enhanced chemical oxidation with hydrogen peroxide", *Water Research*, **34**,17, 4169-4176.
34. Ince N.H., Tezcanlı G., 1999: Treatability of textile dyebath effluents by advanced oxidation", *Water Science & Technology*, **40**, 1, 183-190.
35. Ince, N. H., Dirilgen,N., Apikoglu, I.,Tezcanlı G., Üstün B. 1999: Assessment of toxic Interactions of heavy metals in binary mixtures: a statistical approach, *Archives of Environmental Contamination & Toxicology*, **36**, 4, 1080-1084.
36. Ince, N.H. 1999: Critical effect of H₂O₂ on photochemical dye degradation, *Water Research*, **33**, 4, 1080-1084.
37. Ince, N. H. and Erdoğdu, G. 1998: Toxicity screening, assessment and reduction in a central wastewater treatment plant, *Water Environment Research*, **70**, 1, 170-1178.
38. Ince, N. H.1998: "UV-Enhanced chemical oxidation for tertiary treatment of municipal landfill leachate", *Water Environment Research*, **70**, 1161-1169.
39. Ince, N. H., Stefan M. I. and Bolton J. R. 1997: UV/H₂O₂ degradation and toxicity reduction of textile azo dyes: Remazol Black-B, a case Study. *Journal of Advanced Oxidation Technologies*, **2**(3), 442-448.
40. Ince, N.H, and Gönenç, D. 1997: Treatability of textile azo dyes by UV/H₂O₂ *Environmental Technology*, **18**, 179-185.
41. Ince, N., Yenigun, O., 1995: A critical review of water quality classification system in Turkey: a case Study on Meric Basin", *Environmental Management*, **19**, 601-607.
42. Dirilgen, N. and Ince, N., 1995: Inhibition effects of the anionic surfactant SDS on duckweed with considerations on growth and accumulation, *Chemosphere*, **31**, 4185-4196.
43. Bekbölet, M., Ince, N., Özkosemen, G., Mutlutürk, G., 1994: Determination of nitrate in drinking water: a statistical approach, *Doğa, Turkish National J. of Chemistry*, **18**, 3, 18 –188.
44. Ince, N. I 993: A theoretical approach to modeling the evaporation rates and half lives of some priority pollutants in two major lakes of Istanbul, *International J. of Environmental Studies*, **40**, 1-9.
45. Ince, N., Inel, Y. 1991: A semi-empirical approach to relate volatilization rates of organic chemicals to their physical properties, *Water Research*, **25**, 8, 903.
46. Ince, N. and Inel, Y., 1989: Volatilization of organic chemicals from water, *Water, Air & Soil Pollution*, **47**, 71.