

Curriculum Vitae

Asst. Prof. Dr. YA AR AKDO AN

**zmir Institute of Technology
Materials Science and Engineering
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PERSONAL INFORMATION

Date of Birth: 09 March 1981
Sex: Male
Marital Status: Married
Nationality: Turk

WORK EXPERIENCE

- 12/2013- **Asst. Prof.** at zmir Institute of Technology, Materials Science and Engineering.
- 06/2012-10/2013 **Postdoctoral fellow** in the group of Prof. Dr. Songi Han at University of California Santa Barbara, UCSB
- Studying early protein aggregation (Tau proteins in Alzheimer's disease)
 - Adhesive interaction between proteins and surfaces.
- 03/2009-05/2012 **Postdoctoral fellow** in the group of Dr. Dariush Hinderberger / Prof. Dr. Hans W. Spiess at Max Planck Institute for Polymer Research
- Studying protein structures with different EPR techniques.

EDUCATION

- 02/2006 - 02/2009 **Ph. D. in Chemistry,**
Institute of Physical Chemistry, Stuttgart University, Germany
- Thesis Topic: Synthesis, Characterization and Chemical Behaviour of Small Paramagnetic Pt Species inside Zeolites Studied by EPR, XAS, and FTIR
 - Advisor: Prof. Dr. Emil Roduner
 - Member of Graduate College on Modern Methods of Magnetic Resonance in Materials Research
- 09/2004 - 01/2006 **M. Sc. in Chemistry,**
Department of Chemistry and Institute of Material Science and Nanotechnology, Bilkent University, Turkey
- Thesis Topic: Synthesis and Characterization of CdS, ZnS and $Zn_xCd_{1-x}S$ Nanoparticles in Mesostructured Silica Materials
 - Advisor: Prof. Dr. Ömer Da
- 09/1999 - 05/2004 **B. Sc. in Chemistry,**
Department of Chemistry, Bilkent University, Turkey

PUBLICATIONS

15- **Y. Akdogan**, W. Wei, K. -Y. Huang, Y. Kageyama, E. W. Danner, D. R. Miller, N. R. M. Rodriguez, J. H. Waite, S. Han, *Intrinsic Surface-Drying Properties of Bioadhesive Proteins*, **Angew. Chem. Int. Ed.**, 2014, 126, 11435 –11438.

- 14- D. R. Kattinig, **Y. Akdogan**, I. Lieberwirth, D. Hinderberger, *Spin probing of supramolecular structures in 1-butyl-3-methyl-imidazolium tetrafluoroborate/water mixture* **Mol. Phys.**, 111, 2723-2737, 2013.
- 13- **Y. Akdogan**, J. Reichenwallner, D. Hinderberger, *Evidence for water-tuned structural differences in proteins: An approach emphasizing variations in local hydrophilicity*, **PLOS ONE**, 7(9), e45681, 2012.
- 12- **Y. Akdogan**, Y. Wu, K. Eisele, M. Schaz, T. Weil, D. Hinderberger, *Host-Guest Interactions in Polycationic Human Serum Albumin Bioconjugates*, **Soft Matter**, 8, 11106-11114, 2012.
- 11- **Y. Akdogan**, V. Anbazhagan, D. Hinderberger, D. Schneider, *Heme binding constricts the conformational dynamics of the cytochrome b559' heme binding cavity*, **Biochemistry**, 51, 7149-7156, 2012.
- 10- D. R. Kattinig, **Y. Akdogan**, C. Bauer, D. Hinderberger, *High-Field EPR Spectroscopic Characterization of Spin Probes in Aqueous Ionic Liquid Mixtures*, **Z. Phys. Chem.**, 226, 1363-1378, 2012.
- 9- **Y. Akdogan**, D. Hinderberger, *Solvent-Induced Protein Refolding at Low Temperatures*, **J. Phys. Chem. B**, 115, 15422-15429, 2011.
- 8- M. M. Haimann, **Y. Akdogan**, R. Philipp, R. Varadarajan, D. Hinderberger, W. E. Trommer, *Conformational Changes of the Chaperone SecB Upon Binding to a Model Substrate – Bovine Pancreatic Trypsin Inhibitor (BPTI)*, **Biol. Chem.**, 392, 849-858, 2011.
- 7- **Y. Akdogan**, M. J. N. Junk, D. Hinderberger, *Effect of Ionic Liquids on the Solution Structure of Human Serum Albumin*, **Biomacromolecules**, 12, 1072-1079, 2011.
- 6- **Y. Akdogan**, J. Heller, H. Zimmermann, D. Hinderberger, *The Solvation of Nitroxide Radicals in Ionic Liquids Studied by High-Field EPR Spectroscopy*, **Phys. Chem. Chem. Phys.**, 12, 7874-7882, 2010.
- 5- J. Bartolomé, F. Bartolomé, L. M. García, E. Roduner, **Y. Akdogan**, F. Wilhelm, A. Rogalev, *Magnetization of Pt₁₃ clusters supported in a NaY zeolite: A XANES and XMCD study*, **Phys. Rev. B**, 80, 014404, 2009.
- 4- **Y. Akdogan**, S. Anantharaman, X. Liu, G. K. Lahiri, H. Bertagnolli, E. Roduner, *Reconstruction of Pt₁₃ cluster into Pt₂(CO)_m on CO addition in NaY zeolites*, **J. Phys. Chem. C**, 113, 2352-2359, 2009.
- 3- Y. Sehlleier, **Y. Akdogan**, A. Verhoeven, E. Roduner, M. Jansen, *EPR studies of SiBNC pre-ceramics polymers and ceramic employing isotope labeling*, **Chem. Matter.**, 20, 7563-7569, 2008.
- 2- **Y. Akdogan**, C. Vogt, M. Bauer, H. Bertagnolli, L. Giurgiu, E. Roduner, *Platinum Species in the Pores of NaX, NaY and NaA zeolites studied using EPR, XAS and FTIR Spectroscopies*, **Phys. Chem. Chem. Phys.**, 10, 2952-2963, 2008.
- 1- **Y. Akdogan**, C. Uzum, Ö. Dag, N. Coombs, *Synthesis of Solid Solutions of Cd_{1-x}Zn_xS Nanocrystals in the Channels of Mesostructured Silica Films*, **J. Mater. Chem.**, 16, 2048-2055, 2006 (cover).

RESEARCH EXPERIENCES

Postdoc

Protein-surface interactions.
 Protein unfolding/refolding
 Protein structure and dynamic
 Bioapplications of Ionic Liquids
 Solvation structures and chemistry of Ionic Liquids

Ph. D.

Zeolite chemistry

Synthesis of paramagnetic Pt nanoparticles

CO and NO adsorption chemistry

M. Sc.

Solid solution of $\text{Cd}_x\text{Zn}_{1-x}\text{S}$ nanocrystals as a thin film

Mesostructured silica films