

Assoc.Prof.Dr. Abdurrahman ŞENGÜL

Inorganic Chemistry



Contact Information

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Educational Experience

Period	Degree	University	Education Area
1987-1991	BSc	Çukurova University	Chemistry
1993-1995	MSc	University of wales,Cardiff, UK	Inorganic Chemistry
1995-1998	PhD	University of wales,Cardiff, UK	Inorganic Chemistry
2002-2003	Post-Doc	Tamkang Uni, Taipei, Taiwan	Inorganic Chemistry

Academical Experience

Period	Title	Department	University
1993-1994	Res. Assist.	Inorganic Chemistry	ZKU
1998-2005	Assist.Prof.Dr.	Inorganic Chemistry	ZKU
2005-present	Assoc.Prof.Dr.	Inorganic Chemistry	ZKU

Research Areas

Coordination Chemistry & Supramolecular Chemistry
Multinuclear platinum(II) complexes (supermolecules) as anticancer drug agents
N₄-macrocycles derived from phenanthroline and bipyridine
Sterically hindered bipyridines for ATRP
Metal complexes of chiral N,N'-heterocycles for catalysis

Publications

International Journals

1. Abdurrahman Sengul and R. D. Gillard "Addition of hydroxide to an isoelctronic series of bis-diazineplatinum(II) complex ions". *Transition Met. Chem.*, **23**, 663-666, (1998).
2. Abdurrahman Sengul, Michael B. Hursthouse, Simon J. Coles and Robert D. Gillard "6,6'-Dimethyl-2,2'-bipyridyl" *Acta Cryst.* **C54**, 661-662, (1998).
3. Sengul, A. Oldroyd, and R. D. Gillard "Dimorphism in a 2,2'-terpyridyl compound", *Transition Met. Chem.*, **26**, 339-344, 2001.
4. Gameiro, A. M. F., Gillard, R. D., Rees, N. H., Schulte, J. and Sengul, A. "Equilibria in Complexes of N-Heterocycles. Part 50. ¹The Formation and Properties in Solution of the 1:1 adducts of Bis(2,2'-Bipyridine)platinum(II) and Related Ions with Hydroxide", *Croat. Chem. Acta.*, **74(3)**, 641-665, 2001
5. Wang, J. W., Sengul, A., Luo, C. F., Kao, H. C. and Cheng, Y. H., "Facile one-step synthesis of a thia-bridged bis-1,10-phenanthroline macrocycle", *Tetrahedron Lett.*, 7099-7101, 2003.
6. Sengul, A., Karadayi, N. and Buyukgungor, O., "*N,N*-Bis(1-pyrazine-2-yl-ethylidene)-hydrazine", *Acta Cryst.*, **C60**, o507-o508, 2004.
7. Sengul, A. and Karadayi, N., "4-[*N,N*-Bis(2-hydroxyimino-2-phenyl-ethyl)amino]-1,5-dimethyl-2-phenyl-2,3-dihydro-1*H*-pyrazole-3-one monohydrate", *Acta Cryst.*, **C60**, o539-o541, 2004.

8. Sengul, A., "Crystal and Molecular Structure of the Yellow Form of Chloro(2,2':6',2"-terpyridine)platinum(II) chloride dihydrate, [Pt(terpy)Cl]Cl·2H₂O", *Turk J Chem.*, **28**, 667-672, 2004
9. Sengul, A., "An Atropisomeric Chiral 2,2'-bipyridyl-3,3dicarboxylic acid and Corresponding Platinum(II) complex" *Turk J Chem.*, **28**, 703-713, 2004
10. Sengul, A. and Buyukgungor, O., "*trans*-Diaquabis(6-hydroxypicolinato- $\kappa^2 N, O^2$)copper(II)", *Acta Cryst.*, **C61**, m119-m121, 2005.
11. Şengül, A., "Crystal Structure of Nitrate(2,2',2"-terpyridyl)platinum(II) Hydrogen Dinitrate, [Pt(terpy)ONO₂][H(ONO₂)₂]" *Turk. J. Chem.*, **29**, 571-578 (2005).
12. Arslan, H., Şengül, A., Aygün, S., Karadayı, N., Bayarı, H. S., "Infrared Spectrum, Molecular Structure and Theoretical Calculation of 2-Pyridone-6-Carboxylic Acid", *J. Mol. Structure*, 839, 76-83 (2007)
13. Abdurrahman Sengul, Wen-Jwu Wang, Simon J. Coles "Spontaneous Assembly of Dinuclear Helical Complexes of Schiff-Based Bipyridine Ligand with Silver (I) and Zn (II)", *Eur. J. Inorg. Chem*, 2007 DOI:10.1002/ejic.200
14. Abdurrahman Şengül, Haydar Aslan, Sevgi H. Bayarı, Orhan Büyükgüngör, "Structural And Vibrational Investigation of 1,2-Bis(3,4-Dimethoxyphenyl)Ethane-1,2-Dione (Veratril) Experimental And Theoretical Studies" *Struct.Chem.* 2007, Doi: Stuc-S-07-00213

International Symposiums

1. **University of British Colombia, Vancouver, Canada, 1996** 31st International Coordination Chemistry Conference "A Novel Isotope Effect in Base Hydrolysis". **2P44**
2. **University of Wales, UK, 1997** Gregynog Chemistry Symposium "Secondary Kinetic Isotope effect"

National Symposiums

1. **XII. National Chemistry Congress, Samsun, Turkey, 1999** "Synthesis of deuterated isotopomeric bipyridyls and investigation of the reaction of their metal complex ions with hydroxide ion in aqueous solution". **S-0212**
2. **XV. National Chemistry Congress, Istanbul, Turkey, 2001** "Dimorphism in square-planar platinum(II) complexes of *N,N*-Heterocycles" **AN-S2**
3. **XV. National Chemistry Congress, Istanbul, Turkey, 2001** "Determination of fenols and carboxylic acids in waste water by ion-pair extraction-GC/MS method" **AK-S2**
4. **XVIII. National Chemistry Congress, Kars, Turkey, 2004** "Square-planar platinum(II) complex compounds with 2-cyano-1,10-phenanthroline and 2-cyano-2,2'-bipyridine"
5. **II. National Affinity Technics Congress, Zonguldak, Turkey, 2006** "UV-Vis spectrofotometric studies of drug-DNA interactions" S.S.27
6. **II. National Affinity Technics Congress, Zonguldak, Turkey, 2006** "Stduides of interactions 4,4'-Dinitro-2,2'-bipyridine-N,N'-dioxide with DNA by flow-cytometry and DNA analysis" P-3
7. **II. National Affinity Technics Congress, Zonguldak, Turkey, 2006** "Studies of interactions of some novel platinum(II) heterocyclic complexes with DNA by flow-cytometry " P-4
8. **I. Inorganic Days, Adana, Turkey, 2007** "The multinuclear complexes of polypyridine types ligands." P-43

Projects

1. Synthesis and transition metal complexes of new polyamide and polyester derived from diazine, 2001-13-02-28
2. Synthesis and analytical application of novel dioxime incorporating 4-aminopyrazoline. 2001-13-02-31
3. New dioxime and Schiff base ligands, 2002-13-02-08.
4. Synthesis and supramolecular architectures of the metal complexes of polypyridine type ligands. TBAG-2450(104T060), 2004-2006

5. Synthesis of multi-functional polypyridine derivatives and their corresponding supramolecular chemistry, 2004-13-02-17.
6. The syntheses of metalo-supramolecular complexes, TBAG-HD/86(105T407), 2006.
7. Metal complexes of Poly (bidentate) ligands and DNA interactions. 2007/2-13-02-11
8. Transition metal complexes of Di-imine ligands. 2007/3-13-02-01
9. Metal complexes of *N*-heterocycle compounds, 2007/2-13-03-12
10. Metal complexes of Polydentate *N*-heterocycle compounds, 2007/2-13-02-10

Courses

Undergraduate Courses

Inorganic Chemistry I
Inorganic Chemistry II
Inorganic Chemistry Lab
Professional Foreign Language
S- and P-Block Elements

Graduate Courses

Advanced Inorganic Chemistry I
Advanced Inorganic Chemistry II
Supramolecular Chemistry