

**YUANJIAN DENG**

Professor, Department of Chemistry  
College of Science and Technology, Texas Southern University  
Houston, Texas 77004

**1. EDUCATION:**

- 09/86-08/90 Ph.D., Analytical Chemistry, University of Houston, Houston, TX  
Dissertation: *Electrochemical, spectroelectrochemical and structural characterization of iridium and ruthenium porphyrins, Schiff-base biquinone complexes, copper triazole complexes and flavins*. Advisor: Professor Karl M. Kadish
- 02/82-10/84 M.S., Environmental Chemistry, Chinese Academy of Sciences, Beijing, P.R. China  
Thesis: *Coordination reactions of nitric oxide to Fe(II) chelates*. Advisor: Professor Yahui Zhuang
- 03/78-01/82 B.S., Inorganic Chemistry, Wuhan University, Wuhan, P.R. China

**2. EMPLOYMENT:**

- 9/05-present Professor, Texas Southern University, Houston, TX  
9/99-8/05 Associate Professor, Texas Southern University, Houston, TX  
1/94-8/99 Assistant Professor, Texas Southern University, Houston, TX  
5/92-12/93 Postdoctoral Fellow, Texas Southern University, Houston, TX  
9/90-4/92 Project Investigator, UT M.D.Anderson Cancer Center, Houston, TX  
8/86-8/90 Teaching/Research Assistant, University of Houston, Houston, TX  
11/84-07/86 Research Assistant, Research Center for Eco-Environmental Sciences (formally Institute of Environmental Chemistry), Chinese Academy of Sciences, Beijing, China

**3. REFEREED JOURNAL ARTICLE PUBLICATIONS:**

1. Naidu, N.V.; Arman, H.; Deng, Y.J.; Wei, X. "Preparation and characterizations of 4-amino-2-anilinopyridine and its chlorodiruthenium(III,II) complex", *J. Coord. Chem.* 2014, 67(18), 3006-3017.
2. Fang, J.; Wei, X.; Sapp, J.B.; Deng, Y.J. "Novel platinum(II) complexes containing diaminocyclohexane and thiourea derivative ligands: Synthesis and X-ray crystal structure of (*trans*-1,2-diaminocyclohexane)dithioureaplatinum(II) nitrate monohydrate", *Inorg. Chim. Acta*, 2014, 411, 5-10.
3. Lin, J.X.; Lu, G.Y.; Daniels, L.M.; Wei, X.; Sapp, J.B.; Deng, Y.J. "Synthesis and characterization of platinum(II) complexes with 2-imidazolidinethione. X-ray crystal structure of tetra(2-imidazolidinethione-*S*)platinum(II) iodide dimethylsulfoxide solvate monohydrate", *J. Coord. Chem.* 2008, 16, 2457-2469.
4. Zou, C.P.; Brewer, M.; Cao, X.Y.; Zang, R.Y.; Lin, J.X.; Deng, Y.J.; Li, C. "Antitumor activity of 4-(*N*-hydroxyphenyl)retinamide conjugated with poly(*L*-glutamic acid) against ovarian cancer xenografts", *Gynecol. Oncol.*, 2007, 107, 441-449.
5. Tao, K.; Yang, S.Y.; Wei, X.; Grunlan, J.C.; Kim, Y.-S.; Deng, Y.J.; Dang, B.; Thomas, R.L.; Wilson, B.L. "Effects of carbon nanotube fillers on the curing processes of epoxy resin-based composites", *J. Applied Polymer Sci.* 2006, 102, 5248-5254.
6. Deng, Y. J.; Huang, M.-J. "Quantum chemical investigation of a dinuclear iridium porphyrin and its  $\pi$ -cation biradical", *Chem. Phys.*, 2006, 321, 133-139.
7. Deng, Y. J.; Huang, M.-J. "Capillary electrophoretic separation and theoretical study of inclusion complexes of sulfobutyl ether  $\beta$ -cyclodextrin with estrogens", *Int. J. Quant. Chem.* 2004, 100, 746-752.
8. Deng, Y. J. "Weak electrolytes: when should we solve the quadratic equation?", *Chem. Educator*, 2003, 295-297.
9. Deng, Y. J. "One setup, three systems", *Chem. Educator*, 2002, 205-206.
10. Deng, Y.J.; Zhou, J.X.; Perkins, M.; Lunte, S.M. "Capillary electrophoretic separation of estrogens using anionic sulfobutyl ether  $\beta$ -cyclodextrin", *Anal. Commun* 1997, 34, 129-131.

11. Deng, Y.J. "Ideal mixing of multicomponent systems: Gibbs energy minimization and entropy maximization", *New J. Chem.* 1997, 21, 163-165.
12. Khokhar, A.R.; Deng, Y.J.; Al-Baker, S.; Siddik, Z.H. "A novel class ammine/amine platinum(IV) drugs: synthesis, characterization, and antitumor activity", *J. Bioinorg. Chem.* 1993, 51, 677-687.
13. Deng, Y.J.; Khokhar, A.R. "Crystallographic characterization of *trans*-diacetato(1,1-cyclobutane-dicarboxylato)ethylenediamineplatinum(IV) trihydrate", *Inorg. Chim. Acta.* 1993, 204, 35-38.
14. Khokhar, A.R.; Deng, Y.J.; Kido, Y.; Siddik, Z.H. "Preparation, characterization, and antitumor activity of new ethylenediamine platinum(IV) complexes containing mixed carboxylate ligands", *J. Bioinorg. Chem.* 1993, 15, 79-87.
15. Khokhar, A.R.; Deng, Y.J. "Synthesis and characterization of platinum(II) and platinum(IV) complexes containing *R*-(-)-cyclohexylethylamine", *J. Coord. Chem.* 1992, 25, 349-355.
16. Kadish, K. M.; Tagliatesta, P.; Hu, Y.; Deng, Y. J.; Mu, X. H.; Bao, L. Y. "Evaluation of electron transfer sites in ruthenium(II) octaethylporphyrin complexes of the type (OEP)Ru(CO)(L)", *Inorg. Chem.* 1991, 30, 3737-3743.
17. Deng, Y.J.; Mu, X.H.; Tagliatesta, P.; Kadish, K.M. "Reaction between [(TPP)Ru(CO)]<sup>+</sup> and methyl iodide. Evidence for formation of a ruthenium(II) carbonyl methylated tetraphenylchlorin derivative", *Inorg. Chem.* 1991, 30, 1957-1961.
18. Maiya, G.B.; Deng, Y.J.; Kadish, K.M. "Charge distribution in Schiff-base biquinone complexes. Electrochemical, spectroelectrochemical and ESR studies of complexes of Co<sup>III</sup>, Ni<sup>II</sup>, Zn<sup>II</sup>, Cu<sup>II</sup> and Cd<sup>II</sup> with the N-(2'-hydroxy-3',5'-di-*t*-butylphenyl)-4,6-di-*t*-butyl-*o*-benzoquinone imine ligand system in CH<sub>2</sub>Cl<sub>2</sub>", *J. Chem. Soc., Dalton Trans.* 1990, 3571-3576.
19. Mager, H.I.X.; Tu, S.-C.; Liu, Y.H.; Deng, Y.J.; Kadish, K.M. "Electrochemical superoxidation of flavins: generation of active precursors in luminescent model systems", *Photochem. Photobiol.* 1990, 52, 1049-1056.
20. Kadish, K.M.; Deng, Y.J.; Zaydoun, S.; Idrissi, M.S. "Electrochemical and ESR studies of dichloro(1,2,4-triazole)copper(II) and dichlorobis(1,2,4-triazole)copper(II) in dimethylsulfoxide", *J. Chem. Soc., Dalton Trans.* 1990, 2809-2815.
21. Kadish, K.M.; Deng, Y.J.; Korp, J.D. "Synthesis, X-Ray structure and characterization of [(OEP)IrCl]<sub>2</sub>dppe where OEP is the dianion of octaethylporphyrin and dppe is 1,2-bis(diphenylphosphino)ethane", *Inorg. Chem.* 1990, 29, 1036-1042.
22. Kadish, K.M.; Cornillon, J.-L.; Mitaine, P.; Deng, Y.J.; Korp, J.D. "Influence of *trans* axial ligands on five-coordinate  $\sigma$ -bonded metalloporphyrins. Structural, electrochemical and spectral investigations of (OEP)Ir(C<sub>3</sub>H<sub>7</sub>)(L) complexes", *Inorg. Chem.* 1989, 28, 2534-2542.
23. Kadish, K.M.; Deng, Y.J.; Yao, C.-L.; Anderson, J.E. "Electrochemical and spectroelectrochemical studies of (TPP)[Ir(CO)<sub>3</sub>]<sub>2</sub> in nonaqueous media", *Organometallics* 1988, 7, 1979-1983.
24. Deng, Y.J.; Zhuang, Y.H. "Nitrosyl ferrous chelates III. Kinetics of the reaction of Fe<sup>II</sup>(EDTMP)(NO) and sodium sulfite", *J. Chem. Ind. Eng.* 1988, 455-460.
25. Deng, Y.J.; Wang, S.Q.; Zhuang, Y.H. "Nitrosyl ferrous chelates II. FTIR study on the coordination of nitric oxide to ferrous chelates in aqueous solutions", *Scientia Sinica* 1987, 30, 1021-1028.
26. Deng, Y.J. "A review on study and development of NO coordinated catalytic conversion", *Environ. Chem.* 1985, 4, 1-13.
27. Zhuang, Y.H.; Deng, Y.J. "Nitrosyl ferrous chelates I. Thermodynamics of coordination of NO to Fe<sup>II</sup> chelates in aqueous solutions", *Acta Scientiae Circumstantia* 1985, 5, 347-353.
28. Zhuang, Y.H.; Deng, Y.J. "Environmental effect on the conversion process of nitric oxide", *Environ. Chem.* 1985, March 19 (Special Issue), 11-19.

#### 4. CONFERENCE PROCEEDINGS PUBLICATIONS:

1. Fang, J.; Nguyen, M. Phan, J. Deng, Y.J.; Thomas, R.L.; Wilson, B.L.; Wei, X. "Electropolymerization of polypyrrole on single-walled carbon nanotubes", *the 69<sup>th</sup> Southwest Regional Meeting of the American Chemical Society*, Waco, TX. November 16-20, 2013.
2. Fang, J.; Wei, X.; Sapp, J.B.; Deng, Y.J. "Synthesis and characterization of platinum(II) complexes containing diaminocyclohexane and thiourea ligands", *the 69<sup>th</sup> Southwest Regional Meeting of the American Chemical Society*, Waco, TX. November 16-20, 2013.
3. Wei, X.; Dang, B.; Barrera, E.V.; Zeng, Q.; Grunlan, K.C.; Kim, Y.-S.; Deng, Y.J.; Ying, Y.; Tian, F.; Thomas, R.L.; Phan, T.D.; Wilson, B.L. "Instantaneous electrodeposition of metal

- nanostructures on mass carbon nanotubes”, A paper accepted as an oral presentation in Society for the Advancement of Material and Process Engineering’s meeting in Cincinnati, Ohio, 2007.
4. Dang, B.; Deng, Y.J.; Tao, K.; Wei, X. “PMSE 3-Ligand design of post-metallocene catalysts to obtain block copolymers”, *the 232<sup>nd</sup> American Chemical Society National Meeting*, San Francisco, California, September 10-14, 2006.
  5. Deng, Y.J.; Huang, M.-J. “Quantum chemical investigation of a dinuclear iridium porphyrin and its  $\pi$ -cation biradical”, *the 13<sup>th</sup> Conference on Current Trends in Computational Chemistry*, Jackson State University, November 12-13, 2004.
  6. Cao, X.Y.; Li, C.; Lin, J.X.; Deng, Y.J. “Liquid chromatographic analysis of polymer-bound N-(4-hydroxyphenyl) retinamide”, *the 107<sup>th</sup> Annual Meeting of the Texas Academy of Sciences*, Schreiner University, Kerrville, Texas, March 4-6, 2004.
  7. Zhang, W.L.; Deng, Y.J. “Speciation and determination of chromium(III) and chromium(V) with high-performance liquid chromatography”, *the 107<sup>th</sup> Annual Meeting of the Texas Academy of Sciences*, Schreiner University, Kerrville, Texas, March 4-6, 2004.
  8. Smith, C.A.; Deng, Y.J. “Determination of arsenic in drinking water using high-performance liquid chromatography”, *the 107<sup>th</sup> Annual Meeting of the Texas Academy of Sciences*, Schreiner University, Kerrville, Texas, March 4-6, 2004.
  9. Deng, Y.J. Huang, M.-J. “Capillary electrophoretic separation and theoretical study of inclusion complexes of sulfobutyl ether  $\beta$ -cyclodextrin with estrogens”, *the 12<sup>th</sup> Conference on Current Trends in Computational Chemistry*, Jackson State University, October 31-November 1, 2003.
  10. Dang, B.; Lin, J.X.; Deng, Y.J. “Chemical analysis and toxicity study of Macartney rose”, *the 106<sup>th</sup> Annual Meeting of the Texas Academy of Sciences*, February 28, 2003.
  11. Harrell, W.B.; Deng, Y.J.; Yu, X.T.; Wilson, R.F. “An electrochemical study of gallic acid and its interaction with certain heavy metals in aqueous solution” in *Trace Substances, Environment and Health*, C. R. Cothorn, Ed., Science Reviews: Northwood, 1994, 83-93.
  12. Wilson, R.F.; Deng, Y.J.; Yu, X.T. “Polarographic evaluation of interaction of gallic acid with manganese” in *Trace Substances, Environment and Health*, C. R. Cothorn, Ed., Science Reviews: Northwood, 1994, 125-129.
  13. Harrell, W.B.; Deng, Y.J.; Wilson, R.F. “Coordination mode of certain gallic acid metal interaction”, *the 96<sup>th</sup> Annual Meeting of the Texas Academy of Sciences*, University of North Texas, Denton, Texas, March 5-6, 1993.
  14. Harrell, W.B.; Deng, Y.J.; Yu, X.T.; Wilson, R.F. “Speciation of 3,4,5-trihydroxybenzoic acid with Cd(II), Ni(II), Zn(II), Se(IV) and Hg(II)”, *96<sup>th</sup> Annual Meeting of the Texas Academy of Sciences*, University of North Texas, Denton, Texas, March 5-6, 1993.
  15. Harrell, W.B.; Deng, Y.J.; Yu, X.T. “Interaction of 3,4,5-trihydroxybenzoic acid with some first transition series metals”, *the 96<sup>th</sup> Annual Meeting of the Texas Academy of Sciences*, University of North Texas, Denton, Texas, March 5-6, 1993.

## 5. BOOKS:

1. Sapp, J.B.; Deng, Y.J. *General Chemistry Laboratory*, 1<sup>st</sup> edition (2004), 2<sup>nd</sup> edition (2005), 3<sup>rd</sup> edition (2006), 4<sup>th</sup> edition (2007), 5<sup>th</sup> edition (2010), 6<sup>th</sup> edition (2013). Fountainhead Press, Southlake, Texas.

## 6. PATENTS:

- Xin Wei, Yuanjian Deng, Renard L. Thomas, and Bobby L. Wilson, *Instantaneous electrodeposition of metal nanostructures on carbon nanotubes*, Patent No.: US 8,709,226 B2, April 29, 2014. International patent number 32928/P001WO, pending.

## 7. COURSES TAUGHT:

General chemistry (I and II), inorganic chemistry (I and II), physical chemistry (I and II), quantitative analysis, instrumental analysis, advanced inorganic chemistry, advanced physical chemistry, topics in chemistry (electroanalytical chemistry).