

JIANGUO SHAO, Ph.D.
5228 Sunnybrook Lane
Wichita Falls, TX 76310

EDUCATION

Ph. D. 2001, Analytical Chemistry, University of Houston
M. Sc. 1990, Physical Chemistry, Nanjing University
B. Sc. 1987, Chemistry, Nanjing Normal University

PROFESSIONAL EXPERIENCE

Professor, Midwestern State University, 2017 - *present*
Associate Professor, Midwestern State University, 2011 – 2016
Assistant Professor, Midwestern State University, 2005 – 2010
Research Associate, University of Houston, 2003 – 2005
Postdoctoral Fellow, University of Houston, 2002 – 2003
Graduate Research and Teaching Assistant, University of Houston, 1997 – 2001
Assistant Professor, Nanjing Normal University, 1990 – 1997

TEACHING RESPONSIBILITIES

Analytical Chemistry I	Midwestern State University, 2005 – <i>present</i>
Analytical Chemistry I Lab	University of Houston, 1999 – 2000
	Midwestern State University, 2005 – <i>present</i>
Analytical Chemistry II	Midwestern State University, 2006 – <i>present</i>
Analytical Chemistry II Lab	Midwestern State University, 2006 – <i>present</i>
Intro Environmental Chem	Midwestern State University, 2007 – <i>present</i>
Intro Environmental Chem Lab	Midwestern State University, 2007 – <i>present</i>
General Chemistry I	Midwestern State University, 2005 – <i>present</i>
General Chemistry I Lab	Midwestern State University, 2007 – <i>present</i>
General Chemistry II	Midwestern State University, 2006 – <i>present</i>
Chemistry Independent Study	Midwestern State University, 2006 – <i>present</i>
General Chemistry II Lab	University of Houston, 1997 – 2001
	Midwestern State University, 2008 - <i>Present</i>
Chemistry Seminar	Midwestern State University, 2006 - <i>present</i>
Environmental Chem. Technology	Midwestern State University, 2008
Environmental Chem. Technology Lab	Midwestern State University, 2008
Organic Chemistry I Lab	University of Houston, 1998 and 2000
Physical Chemistry	Nanjing Normal University, 1990 – 1997
Physical Chemistry Lab	Nanjing Normal University, 1990 – 1997

RESEARCH AND SCHOLARLY ACTIVITY (see the pages followed for details)

- Sixty-one research papers published in peer-reviewed journals
- One patent (applied and approved in China)
- Fifty presentations in regional, national and international conferences
- Co-PI, NSF S-STEM Grant (ID# 1458185) with a total amount of \$606,155, providing financial aid to talented STEM students in the MCOSM of MSU (2015 – 2020)

- Co-PI for the continuing chemistry research grant from the Robert A. Welch Foundation (2006 – present)
- Invited speaker, Chemistry Department at the University of Texas at El Paso

AWARDS AND HONORS

- Hardin Professor of the Year 2016
- Chemistry Professor of the Year voted by students (2009)
- Dow Chemical Company Fellowship Award for Outstanding Research (2001)
- Research and Teaching Excellence Award, Nanjing Normal University (1997)

SERVICE

University

- Faculty Grievance Committee (2023 – 2025)
- Financial Aid Appeal Committee (2017 – 2019)
- Member, MSU Research Committee (2013 – 2015)
- Member, MSU Faculty Forum Committee (2008 – 2009; 2010 – 2012)
- Chair, MSU Faculty Forum Committee (2009 – 2010)
- Member, MSU Honors Program Committee (2015 – 2017)
- Associate Member of the Graduate Faculty (2012 – 2018)
- Faculty Senate (2009 – 2011)
- Reviewer of EURECA proposals (2013 – present)
- Judge, MSU Undergraduate Research & Creative Activity Forum (2015 – present)
- Member, Campus Hygiene Response Committee (2011 – 2012)

College and Department

- Member, MCOSM Tenure & Promotion Committee (2015 – 2016; 2020 – 2021)
- Mentor of a new engineering faculty member, (2013 – 2014)
- Chair, MCOSM Faculty Research Committee (2014 – 2015)
- Member, COSM Faculty Research Committee (2008 – 2010; 2013 – 2015; 2017 - 2019)
- Lab Safety Officer of MCOSM (2012 – 2018)
- Member, Lab Safety Committee of MCOSM (2012 – 2018)
- Biology Graduate Advisory Committee (2009 – present)
- Undergraduate Research Advisor (2005 – present)
- Member, MCOSM Dean Search Committee (2012)
- Faculty Search Committee, Department of Chemistry (2010, 2016)
- Student Academic Advisor (2006 – present)
- Faculty Representative of MSU Chapter of the American Chemical Society (2012 – present)
- Faculty Representative of MSU Chapter of ΓΣΕ Honor Society (2014 – present)
- Participant, Family Day, Spirit Day, Mustangs Rally, Majors Fair (2005 – present)

Profession

- Book Reviewer, “Instrumental Analysis” – a new undergraduate textbook published by the Oxford University Press
- Paper Reviewer, “*Journal of Porphyrins and Phthalocyanines*” – an international chemistry journal issued by the Society of Porphyrins and Phthalocyanines

- Paper Reviewer, “*Inorganic Chemistry Communication*”, “*Journal of Environmental Sciences*” and “*Inorganica Chimica Acta*” – international chemistry journals issued by the Elsevier Science
- Paper Reviewer, “*Environmental Science and Pollution Research*” – an international chemistry journal issued by the Springer Science
- Paper Reviewer, “*Turkish Journal of Chemistry*” – an international chemistry journal issued by the Scientific and Technological Research Council of Turkey
- Paper Reviewer, *Texas Journal of Science* issued by the Texas Academy of Science

Community

- Co-Host, the US National Chemistry Olympiad Examination in the Wichita Falls – Duncan area (2010 – present)
- Participant, Chemistry Carnival (Boys and Girls Club) held annually by MSU Student Chapter of the American Chemical Society (2005 – present)
- Great Day Service (2008, 2009, 2010, 2012)
- Faculty Speaker, “Meeting of the Minds” with an Audience of Science Teachers of Local Junior High and High Schools (2006, 2007 and 2009)
- Judge, Red River Regional Science and Engineering Fair (2006 – 2009)
- Chemistry Demonstration at Bowie Elementary School (2009 and 2010)

PROFESSIONAL INVOLVEMENT

- Member, the American Chemical Society (2000 – present)
- Member, the Society of Porphyrins and Phthalocyanines (2000 – present)
- Treasurer, American Chemical Society, Wichita Falls-Duncan (2010 – present)
- Chair, American Chemical Society, Wichita Falls-Duncan (2008 – 2009)
- Chair-Elect, American Chemical Society, Wichita Falls-Duncan (2007 – 2008)
- Secretary and Newsletter Editor, American Chemical Society, Wichita Falls-Duncan (2006 – 2007)

PEER-REVIEWED JOURNAL PUBLICATIONS

- 61) Tomas Grejtak, Sheldon Wang, Jianguo Shao, Modeling of a Blast Furnace with Both CFD and Thermodynamics Principles, *Appl. Mech.* **2022**, 3, 1019 – 1039.
(<https://doi.org/10.3390/applmech3030057>)
- 60) **Jianguo Shao**, Alex Johnson, Christopher A. Hansen, Karl M. Kadish, Baocheng Han, Electroreductive dechlorination of γ -Hexachlorocyclohexane catalyzed by $\text{Rh}_2(\text{dpf})_4$ in nonaqueous media, where $\text{dpf} = \text{N,N}'$ -Diphenylformamidinate (1-) ion, *Journal of Electroanalytical Chemistry*, 837 (2019) 208 – 218.
- 59) **Jianguo Shao**, Rina Kuwahara, DDT Dechlorination Electrocatalyzed by a Synthetic Iron Porphyrin in Pyridine, *Texas J. of Science*, 64(3): 129-143, August, 2012 (Published June 2015).
- 58) Manowong, M.; Han, B.; McAloon, T. R., **Shao, Jianguo**; Guzei, I. A.; Ngubane, S.; van Caemelbecke, E.; Bear, J. L.; Kadish, K. M., The Effect of Axial Ligands on the Spectroscopic and Electrochemical Properties of Diruthenium Compounds, *Inorg. Chem.*, **2014**, 53, 7416 – 7428.
- 57) **Jianguo Shao**, Kema Richards, Dwayne Rawlins, Baocheng Han, Christopher A. Hansen, Synthesis, Electrochemistry, Spectroelectrochemistry and Catalytic Properties in DDT Reductive Dechlorination of Iron(II) Phthalocyanine, 2,3- and 3,4-Tetrapyrrolineporphyrin Complexes, *J. of Porphyrins and Phthalocyanines*, **2013**, 17: 317 – 330.
- 56) **Jianguo Shao**, Abegayl Thomas, Baocheng Han, Christopher A. Hansen, DDT Reductive Dechlorination Catalyzed by Cobalt Phthalocyanine, 2,3- and 3,4-tetrapyrrolineporphyrin Complexes in Nonaqueous Media, *J. of Porphyrins and Phthalocyanines*, **2010**, 14: 133 – 141.
- 55) **Jianguo Shao**, Juliette Commodore, Baocheng Han, Cynthia Prunte, Christopher A. Hansen, Electrochemical, Spectroelectrochemical and ESR Spectroscopic Characterization of 2,3- and 3,4-Cobalt Tetrapyrrolineporphyrin Isomers in Nonaqueous Media, *J of Porphyrins and Phthalocyanines*, **2009**, 13: 876 – 887.
- 54) Kumar, Mukesh; Cervantes-Lee, Francisco; Pannell, Keith H.; **Shao, Jianguo**, Synthesis and Cyclic Voltammetric Studies of the Diiron Complexes $\text{ER}_2[(\eta^5\text{-C}_5\text{H}_4)\text{Fe}(\text{L}_2)\text{Me}]_2$ (E = C, Si, Ge, Sn, R = H, alkyl; L_2 = diphosphine) and $(\eta^5\text{-C}_5\text{H}_4)\text{Fe}(\eta^5\text{-C}_5\text{H}_5)$, *Organometallics*, **2008**, 27(18), 4739 – 4748.
- 53) Shen, Jing; El Ojaimi, Maya; Chkounda, Mohammed; Gros, Claude P.; Barbe, Jean-Michel; **Shao, Jianguo**; Guillard, Roger; Kadish, Karl M., Solvent, Anion, and Structural Effects on the Redox Potentials and UV-visible Spectral Properties of Mononuclear Manganese Corroles, *Inorg. Chem.*, **2008**, 47(17), 7717-7727.
- 52) Sintic, Paul J.; E, Wenbo; Ou, Zhongping; **Shao, Jianguo**; McDonald, James A.; Cai, Zheng-Li; Kadish, Karl M.; Crossley, Maxwell J.; Reimers, Jeffrey R., Control of the site and potential of reduction and oxidation processes in π -expanded quinoxalino porphyrins, *Phys. Chem. Chem. Phys.*, **2008**, 10(4), 268-280.
- 51) E, Wenbo; Kadish, Karl M.; Sintic, Paul J.; Khoury, Tony; Govenlock, Linda J.; Ou, Zhongping; **Shao, Jianguo**; Ohkubo, Kei; Reimers, Jeffrey R.; Fukuzumi, Shunichi; Crossley, Maxwell J., Control of the Orbital Delocalization and Implications for Molecular Rectification in the Radical Anions of Porphyrins with Coplanar 90° and 180° β , β' -Fused Extensions, *J Phys. Chem. A*, **2008**, 112(3), 556-570.
- 50) Kadish, Karl M.; E, Wenbo; Sintic, Paul J.; Ou, Zhongping; **Shao, Jianguo**; Ohkubo, Kei; Fukuzumi, Shunichi; Govenlock, Linda J.; McDonald, James A.; Try, Andrew C.; Cai, Zheng-Li; Reimers, Jeffrey R.; Crossley, Maxwell J., Quinoxalino[2,3- β']porphyrins Behave as π -Expanded Porphyrins upon One-Electron Reduction: Broad Control of the Degree of Delocalization through Substitution at the Macrocyclic Periphery, *J Phys. Chem. B*, **2007**, 111(30), 8762-8774.

- 49) Jing Shen, Zhongping Ou, **Jianguo Shao**, Michal Galezowski, Daniel T. Gryko and Karl M. Kadish, Free-Base Corroles: Determination of Deprotonation Constants in Non-aqueous Media, *Journal of Porphyrins and Phthalocyanines* **2007**, *11*, 269-276.
- 48) Zhongping Ou, Jing Shen, **Jianguo Shao**, Wenbo E, Michal Galezowski, Daniel T. Gryko, and Karl M. Kadish, Protonated Free-Base Corroles: Acidity, Electrochemistry, and Spectroelectrochemistry of [(Cor)H₄]⁺, [(Cor)H₅]²⁺, and [(Cor)H₆]³⁺, *Inorg. Chem.* **2007**, *46*, 2775 – 2786.
- 47) Ohkubo, K.; Santic, P. J.; Tkachenko, N. V.; Lemmetyinen, H.; E, W.; Ou, Z.; **Shao, J.**; Kadish, K. M.; Crossley, M. J.; Fukuzumi, S., *Chem. Phys.*, **2006**, *326*, 3-14.
- 46) Jing Shen, **Jianguo Shao**, Zhongping Ou, Wenbo E, Beata Koszarna, Daniel T. Gryko, Karl M. Kadish, Electrochemistry and Spectroelectrochemistry of *meso*-Substituted Free-Base Corroles in Nonaqueous Media. Reactions of (Cor)H₃, [(Cor)H₄]⁺ and [(Cor)H₂], *Inorg. Chem.* **2006**, *45*, 2251-2265.
- 45) Kadish, K. M.; **Shao, J.**; Ou, Z., Zhan, R.; Burdet, F.; Barbe, J- M.; Gros, C. P.; Guillard, R., Electrochemistry and Spectroelectrochemistry of Heterobimetallic Porphyrin-Corrole Dyads. Influence of Spacer, Metal Ion and Oxidation State on Pyridine Binding Ability, *Inorg. Chem.* **2005**, *44*, 9023-9038.
- 44) Kadish, K. M.; **Shao, J.**; Ou, Z., Fremond, L.; Zhan, R.; Burdet, F.; Barbe, J- M.; Gros, C. P.; Guillard, R., Electrochemistry, Spectroelectrochemistry, Chloride Binding, and O₂ Catalytic Reactions of Free-Base Porphyrin-Cobalt Corrole Dyads, *Inorg. Chem.* **2005**, *44*, 6744-6754.
- 43) Jiang, Z.; Ou, Z.; Chen, N.; Wang, J.; Huang, J.; **Shao, J.**; Kadish, K. M., Synthesis, Spectral and Electrochemical Characterization of Non-aggregating α -Substituted Vanadium(IV)-oxo Phthalocyanines, *Journal of Porphyrins and Phthalocyanines* **2005**, *9*, 352-360.
- 42) Guillard, R.; Burdet, F.; Barbe, J- M.; Gros, C. P.; Espinosa, E.; **Shao, J.**; Ou, Z.; Zhan, R.; Kadish, K. M., Heterobimetallic Complexes of Cobalt(IV) Porphyrin-Corrole Dyads. Synthesis, Physicochemical Properties, and X-ray Structural Characterization, *Inorg. Chem.* **2005**, *44*, 3972-3983.
- 41) Ou, Z.; E, Wenbo; **Shao, J.**; Burn, P. L.; Sheehan, C. S.; Walton, R.; Kadish, K. M.; Crossley, M. J., Electrochemical and Spectroelectrochemical Properties of Building Blocks for Molecular Arrays: Reactions of Quinoxalino[2,3- β]porphyrins Containing Metal(II) Ions, *Journal of Porphyrins and Phthalocyanines* **2005**, *9*, 142-152.
- 40) Kadish, K. M.; Fremond, L.; Ou, Z.; **Shao, J.**; Shi, C.; Anson, F. C.; Burdet, F.; Gros, C. P.; Barbe, J- M.; Guillard, R., Cobalt(III) Corroles as Electrocatalysts for the Reduction of Dioxygen: Reactivity of a Monocorrole, Biscorroles, and Porphyrin-Corrole Dyads, *J. Am. Chem. Soc.* **2005**, *127*, 5625-5631.
- 39) Zhongping Ou, **Jianguo Shao**, Hui Zhao, Kei Ohkubo, Ingar H. Wasbotten, Shunichi Fukuzumi, Abhik Ghosh, Karl M. Kadish, Spectroelectrochemical and ESR studies of highly substituted copper corroles, *Journal of Porphyrins and Phthalocyanines* **2004**, *8*, 1236-1247.
- 38) Zhongping Ou; **Jianguo Shao**; Francis D'Souza; Pietro Tagliatesta; Karl M. Kadish, β -Pyrrole brominated *meso*-tetraphenylporphyrins: Synthesis, spectral and electrochemical properties, *Journal of Porphyrins and Phthalocyanines*, **2004**, *8*, 201-214.
- 37) Baocheng Han, **Jianguo Shao**, Zhongping Ou, Tuan D. Phan, Jing Shen, John L. Bear, Karl M. Kadish, Synthesis and Characterization of Nitrosyl Diruthenium Complexes. Interaction between NO and CO across the Metal-Metal Bond, *Inorg. Chem.*, **2004**, *43*, 7741-7751.
- 36) Roger Guillard, Francois Jerome, Jean-Michel Barbe, Claude P. Gros, Enrique Espinosa, **Jianguo Shao**, Zhongping Ou, Jean Fisher, Raymond Weiss, Karl M. Kadish, Aryl and Aryl Substituted Corroles. 5. Synthesis and Characterization of Bis-Copper Complexes, *Inorg. Chem.*, **2004**, *43*, 7441-7455.
- 35) Zhongping Ou; Karl M. Kadish; Wenbo E; **Jianguo Shao**; Paul J. Santic; Kei Ohkubo; Shunichi Fukuzumi and Maxwell J. Crossley, Substituent Effects on the Site of Electron Transfer During the First Reduction for Gold(III) Porphyrins, *Inorg. Chem.*, **2004**, *43*, 2078-2086.

- 34) Kei Ohkubo; Hiroaki Kotani; **Jianguo Shao**; Zhongping Ou, Karl M. Kadish; Guolin Li; Ravindra K. Pandey; Mamoru Fujitsuka; Osamu Ito; Hiroshi Imahori and Shunichi Fukuzumi, Ultra-Long Lived Charge-Separated in Zinc Chlorin-C₆₀ Dyad Produced by One-Step Photoinduced Electron Transfer, *Angew. Chem., Int. Ed.*, **2004**, *43*, 853-856.
- 33) Karl M. Kadish; Tuan D. Phan; Lingamallu Giribabu; **Jianguo Shao**; Li-Lun Wang; Antoine Thuriere; Eric Van Caemelbecke; John L. Bear, Electrochemical and Spectroelectrochemical Characterization of Ru₂⁴⁺ and Ru₂³⁺ Complexes Under a CO Atmosphere, *Inorg. Chem.* **2004**, *43*, 1012-1020.
- 32) Shunichi Fukuzumi; Kei Ohkubo; Wenbo E; Zhongping Ou; **Jianguo Shao**; Karl M. Kadish; James A. Hutchison; Kenneth P. Ghiggino; Paul J. Sentic and Maxwell J. Crossley, Metal-Centered Photoinduced Electron Transfer Reduction of a Gold(III) Porphyrin Cation Linked with a Zinc Porphyrin to Produced a Long-Lived Charge-Separated State in Nopolar Solvents, *J. Am. Chem. Soc.*, **2003**, *125*, 14984-14985.
- 31) Zhongping, Ou, Pietro Tagliatesta, Mathias O. Senge, **Jianguo Shao**, Karl M. Kadish, Synthesis and Electrochemical Investigation of Covalently Linked Porphyrin Dimers Containing a β -brominated subunit. Crystal structure of H₂[tripp-tpp(Br₈)]H₂, *Journal of Porphyrins and Phthalocyanines* **2003**, *7*, 595-609.
- 30) Karl M. Kadish, **Jianguo Shao**, Zhongping Ou, Claude P. Frederic Bolze, Francois Jerome, Roger Guilard, Aryl Substituted Corroles. 4. Solvent Effects on the Electrochemical and Spectral Properties of Cobalt Corroles, *Inorg. Chem.*, **2003**, *42*, 4062-4070.
- 29) Kei Ohkubo; Hiroshi Imahori; **Jianguo Shao**; Zhongping Ou; Karl M. Kadish; Yihui Chen; Gang Zheng; Ravindra K Pandey; Mamoru Fujitsuka; Osamu Ito; Shunichi Fukuzumi, Intramolecular Electron Transfer in Bacteriochlorin-C₆₀ and Zinc Chlorin-C₆₀ dyads, *Proceedings-Electrochemical Society* **2002**, *12*, 70-81.
- 28) Kei Ohkubo; Hiroshi Imahori; **Jianguo Shao**; Zhongping Ou; Karl M. Kadish; Yihui Chen; Gang Zheng; Ravindra K. Pandey; Mamoru Fujitsuka; Osamu Ito; Shunichi Fukuzumi, Small Reorganization Energy of Intramolecular Electron Transfer in Fullerene-Based Dyads with Short Linkage, *J. Phys. Chem. A* **2002**, *106*, 10991-10998.
- 27) Karl M. Kadish, Zhongping Ou, **Jianguo Shao**, Claude P. Gros, Jean-Michel Barbe, Francois Jerome, Frederic Bolze, Roger Guilard, Aryl and Aryl Substituted Corroles. 3. Reactions of Cofacial Cobalt Biscorroles and Porphyrin-Corroles with Pyridine and Carbon Monoxide, *Inorg. Chem.*, **2002**, *41*, 3990-4005.
- 26) Karl M. Kadish; Fabien Burdet; Francois Jerome; Jean-Michel Barbe; Zhongping Ou; **Jianguo Shao**; Roger Guilard, Synthesis, Physicochemical and Electrochemical Properties of Metal-Metal Bonded Ruthenium Corrole Homodimers, *J. Organometallic Chemistry*, **2002**, *652*, 69-76.
- 25) Shunichi Fukuzumi; Kei Ohkubo, Yihui Chen; Ravindra K. Pandey; Riqiang Zhan; **Jianguo Shao**; Karl M. Kadish, Photophysical and Electrochemical Properties of New Bacteriochlorins and Characterization of Radical Cation and Radical Anion Species, *J. Phys. Chem. A* **2002**, *106*, 5105-5113.
- 24) Karl M. Kadish; Wenbo E; Zhongping Ou; **Jianguo Shao**, Paul J. Sentic; Kei Ohkubo; Shunichi Fukuzumi; Maxwell J. Crossley, Evidence that Gold(III) Porphyrins Are Not Electrochemically Inert: Facile Generation of Gold(II) 5, 10, 15, 20-tetrakis(3,5-di-tert-butylphenyl) Porphyrin, *Chem. Commun.*, **2002**, 356-357.
- 23) Karl M. Kadish, Baocheng Han, **Jianguo Shao**, Zhongping Ou, John L. Bear, Synthesis and Characterization of Diruthenium Complexes in Low Oxidation States. Formation of Mono- and Bis-CO Adducts, *Inorg. Chem.*, **2001**, *40*, 6848-6951.
- 22) Shunichi Fukuzumi, Kei Ohkubo, Hiroshi Imahori, **Jianguo Shao**, Zhongping Ou, Gang Zheng, Yihui Chen, Ravindra K. Pandey, Mamoru Fujitsuka, Osamu Ito, Karl M. Kadish, Unusually long-Lived Charged Separated-States of Chlorin- and Porphyrin-C₆₀ Dyads with the Same Short Spacer, *J. Am. Chem. Soc.*, **2001**, *123*, 10676-10683.
- 21) Roger Guilard, Francois Jerome, Claude P. Gros, Jean-Michel Barbe, Zhongping Ou, **Jianguo**

- Shao**, Karl M. Kadish, Aryl Substituted Corroles. 2. Synthesis and Characterization of Linked Face-to-Face Bis-Corroles, *Inorg. Chem.*, **2001**, *40*, 4856-4865.
- 20) Roger Guillard, Claude P. Gros, Frederic Bolze, Francois Jerome, Zhongping Ou, **Jianguo Shao**, Karl M. Kadish, Aryl Substituted Corroles. 1. Synthesis and Characterization of Free Base and Cobalt Containing Derivatives. X-ray Structure of (Me₄Ph₅Cor)Co(py)₂, *Inorg. Chem.*, **2001**, *40*, 4845-4855.
- 19) Shunichi Fukuzumi, Kei Ohkubo, Hiroshi Imahori, **Jianguo Shao**, Zhongping Ou, Gang Zheng, Yihui Chen, Ravindra K. Pandey, Mamoru Fujitsuka, Osamu Ito, Karl M. Kadish, Photochemical and Electrochemical Properties of Zinc Chlorin-C₆₀ Dyad as Compared to Corresponding Porphyrin-C₆₀ Dyads in "Recent Advances in the Chemistry and Physics of Fullerenes", Vol. 11, P. Kamat, D. Guldi and K. M. Kadish, Eds., The Electrochemical Society, Pennington, **2001**, 60-71.
- 18) Roger Guillard, Francois Jerome, Claude P. Gros, Jean-Michel Barbe, Zhongping Ou, **Jianguo Shao**, Karl M. Kadish, Synthesis of an Anthracenyl Bridged Porphyrin-Corrole Bismacrocycle. Physicochemical and Electrochemical Characterization of the Biscobalt μ -superoxo Derivative, *C. R. Acad. Sc., Ser. II*, **2001**, 245-254.
- 17) Bo Zhou; Xuecheng Sun; Jie, Yao; **Jianguo Shao**; Suochuan Wu; Zhongyue Meng *Nanjing Shida Xuebao, Ziran Kexueban*, **2000**, *23*, 62-66.
- 16) Shunichi Fukuzumi, Kei Ohkubo, Tomoyoshi Suenobu, Osamu Ito, Mamoru Fujitsuka, **Jianguo Shao**, Karl M. Kadish, Electron Transfer Disproportionation of C₆₀ Radical Anion Catalyzed by Metal Ions in "Fullerenes 2000 Electrochemistry and Photochemistry", Vol. 8, Shunichi Fukuzumi, Francis D'Souza and D. Guldi, Eds., The Electrochemistry Society, Pennington, **2000**, 68-78.
- 15) Karl M. Kadish, **Jianguo Shao**, Zhongping Ou, Caroline Comet, Claude P. Gros and Roger Guillard, Electrochemical and Spectroscopic Characterization of Cobalt and Zinc Diaz-18-Crown-6-Porphyrins and of a Zinc Dioxocyclam Porphyrin, *J. Porphyrins Phthalocyanines*, **2000**, *4*, 639-648.
- 14) Francis D'Souza, Melvin E. Zandler, Pietro Tagliatesta, Zhongping Ou, **Jianguo Shao**, Eric Van Caemelbecke and Karl M. Kadish, Electronic, Spectral and Electro-chemical Properties of (TPPBr_x)Zn where TPPBr_x is the Dianion of β -Brominated-Pyrrole Tetraphenylporphyrin and x varies from 0 to 8, *Inorg. Chem.*, **1998**, *37*, 4567-4572.
- 13) Jie, Yao; Chun Yang; **Jianguo Shao**; Bo Zhou *Nanjing Shida Xuebao, Ziran Kexueban*, **1997**, *20*, 46-51.
- 12) **Jianguo Shao**, Bo Zhou, Jie Yao, Suochun Wu and Zhongyue Meng, The Studies of Esterification of Maleic Anhydride with Several Alcohols under the Catalysts of Superacids, *Speciality Petrochemicals (Chinese)*, **1996**, *71*, 37-40.
- 11) **Jianguo Shao**, Jie Yao, Chaojun Jiao, Bo Zhou, Chun Yang, Suochun Wu, The Measurement of the Specific Surface Area and Acidity of Y Zeolites Modified by Organosilicon Compounds, *Nanjing Shida Xuebao, Ziran Kexueban*, **1995**, *18*, 36-40.
- 10) **Jianguo Shao**, Qinghua Liu, Bo Zhou, Jie Yao, Suochun Wu, The Alkylation of Phenol with Styrene in the Fixed-Bed System, *Nanjing Shida Xuebao, Ziran Kexueban*, **1995**, *18*, 48-52.
- 9) **Jianguo Shao**, Dasheng Xu, Songling Jia, Chun Yang, Suochun Wu, Zhongyue Meng, A New Experimental Method to Measure the Specific Surface Area and Pore Size Distribution of Solid Samples, *Hua Xue Tong Bao*, **1994**, *12*, 45-47.
- 8) Songling Jia, **Jianguo Shao**, Wanming Sun, Chun Yang, Jie Yao, Suochun Wu, Zhongyue Meng, The Synthesis of Di-2-Ethylhexyl Maleate Catalyzed by a Heterogeneous Catalyst, *Petrochemical Technology (Chinese)*, **1994**, *23*, 235-238.
- 7) Songling Jia, **Jianguo Shao**, Shuyong Xiao, Chun Yang, Jie Yao, Suochun Wu, Zhongyue Meng, Ring Alkylation of Aniline in the Presence of Zeolite, *Petrochemical Technology (Chinese)*, **1994**, *23*, 637-641.
- 6) **Jianguo Shao**, Songling Jia, Suochuan Wu, Zhongyue Meng, The Structure of Y Zeolites Modified by Organosilicon Compounds, *Chinese J. of Catal.*, **1994**, *15*, 457-462.

- 5) **Jianguo Shao**, Songling Jia, Chun Yang, Suochun Wu, Zhongyue Meng, Using HY Zeolite for the Synthesis of α -Methylbenzyl Phenol, *Petrochemical Technology (Chinese)*, **1993**, 22, 150-155.
- 4) Suochuan Wu, Songling Jia, **Jianguo Shao**, Chun Yang, The Properties of Surface Acid of Fe-Containing Zeolites, *Chinese J. of Catal.*, **1993** (supplement), 110-115.
- 3) Dasheng Xu, **Jianguo Shao**, The Measurement of the Specific Surface Area and Pore Size Distribution of a Catalysts, *Nanjing Shida Xuebao, Ziran Kexueban*, **1992**, 15, 44-48.
- 2) **Jianguo Shao**, Shuyong Xiao, Zhongyue Meng, NaY Zeolite Modified by Organosilicon Compounds, *Chinese J. of Catal.*, **1992**, 13, 74-78.
- 1) Shuyong Xiao, **Jianguo Shao**, Zhongyue Meng, The Studies of Y-Zeolite Treated with Trimethylchlorosilicane, *Chinese J. of Catal.*, **1989**, 10, 378-382.

PATENT

- 1) Wu, Suochuan; Zhou, Bo; **Shao, Jianguo**, Catalysts for Synthesizing Mono-, Di- and Tri-Substituted Alkylphenols with Different Proportions by a One-Step Process, *Faming Zhuanli Shenqing Gongkai Shuomingshu (Chinese Patent)*, **1996**, 8 pages.

PRESENTATIONS

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- 49) Hae Lee Han, Stefanie Blaine, Christopher A. Hansen, Jianguo Shao, Synthesis and Characterization of two aryl substituted dipyrromethenes, *MSU Undergraduate Research and Creative Activity Forum*, April, **2019**, Oral-O6.
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