

Qixin Zhou, PhD

Assistant Professor, Department of Chemical and Biomolecular Engineering
213F Engineering Research Center, The University of Akron, Akron, OH 44325
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EDUCATION

Ph.D.	<i>Mechanical Engineering</i> North Dakota State University (NDSU), Fargo, ND, USA	2014
M.S.	<i>Chemical Engineering</i> East China University of Science & Technology (ECUST), Shanghai, China	2009
B.S.	<i>Chemical Engineering</i> <i>Minor in Management Engineering</i> Hefei University of Technology (HFUT), Hefei, China	2006

APPOINTMENTS

Assistant Professor	Department of Chemical and Biomolecular Engineering The University of Akron, Akron, OH	2014 — Present
Research Assistant	Department of Mechanical Engineering North Dakota State University, Fargo, ND	2009 — 2014

RESEARCH INTEREST

Advanced coating development for corrosion protection; Coating synthesis, formulation, and characterization; Coating evaluation and failure analysis; Coating service lifetime prediction; Computational simulations on coating behaviors; Corrosion monitoring and analysis

GRANTS & RESEARCH FUNDING

1. 2019 Lubrizol Advanced Materials, PI, \$40,000, 1/1/2019~12/31/2019
2. 2019 University of Akron I-Corps, PI, \$2,500, 3/1/2019~2/29/2020
3. 2018 Firestone Research Initiative Fellowship Award, PI, \$10,000
4. 2015 Faculty Research Fellowships, PI, \$10,000, 5/11/2015~8/31/2015
5. 2015 Firestone Research Initiative Fellowship Awards, PI, \$10,000
6. NCERCAMP Project Development Grant, PI, \$2,000, 1/1/2016~5/31/2016

PUBLICATIONS

*: corresponding author

Name: graduate student in Dr. Qixin Zhou's group

Peer-reviewed Journal Articles

At The University of Akron (2014 Aug. – Present):

1. Haoran Wang, Cheng Zhang, Weixiu Zeng, and **Qixin Zhou***, "Making alkyd greener: Modified cardanol as bio-based reactive diluents for alkyd coating," ***Progress in Organic Coatings*** 135 (2019), 281-290.
2. Cheng Zhang, Haoran Wang, Weixiu Zeng, and **Qixin Zhou***, "High biobased carbon content polyurethane dispersions synthesized from fatty acid-based isocyanate," ***Industrial & Engineering Chemistry Research*** 58 (2019), 5195-5201.
3. Weixiu Zeng, Zhifeng Deng, Haoran Wang, Haichang Zhang, **Qixin Zhou***, "Benzodifuranone based color-changing epoxy-polyamine coating," ***Dyes and Pigments*** 164 (2019), 198-205.
4. Cheng Zhang, Haoran Wang, **Qixin Zhou***, "Preparation and characterization of microcapsules based self-healing coatings containing epoxy ester as healing agent," ***Progress in Organic Coatings*** 125 (2018), 403-410.
5. Haoran Wang, **Qixin Zhou***, "Synthesis of cardanol-based polyols via thiol-ene/thiol-epoxy dual click-reactions and thermosetting polyurethanes therefrom," ***ACS Sustainable Chemistry & Engineering*** 6 (2018), 12088-12095.
6. Yang Zhou, Brian Josey, Emmanuel Anim-Danso, Brian Maranville, Jenia Karapetrova, Zhang Jiang, **Qixin Zhou**, Ali Dhinojwala, Mark D. Foster, "In situ nanoscale characterization of water penetration through plasma polymerized coatings," ***Langmuir*** 34 (2018), 9634-9644.
7. Haoran Wang, **Qixin Zhou***, "Evaluation and failure analysis of linseed oil encapsulated self-healing anticorrosive coating," ***Progress in Organic Coatings*** 118 (2018), 108-115.
8. Weixiu Zeng, **Qixin Zhou***, Haichang Zhang, Xiaoning Qi, "One-coat epoxy coating development for the improvement of UV stability by DPP pigments," ***Dyes and Pigments*** 151 (2018), 157-164.
9. Sinuo Lang, **Qixin Zhou***, "Synthesis and characterization of poly(urea-formaldehyde) microcapsules containing linseed oil for self-healing coating development," ***Progress in Organic Coatings*** 105 (2017), 99-110.

Prior to The University of Akron:

10. **Qixin Zhou**, Yechun Wang, Gordon P. Bierwagen, "Flow accelerated degradation of organic clear coat: The effect of fluid shear," ***Electrochimica Acta*** 142 (2014), 25-33.
11. Tongfu Qin, Benxian Shen, **Qixin Zhou**, Jichang Liu, "Biodegradation performance of an inner-loop three-phase fluidized-bed bioreactor to treat petrochemical wastewater," ***Petroleum Science and Technology*** 32 (2014), 848-855.
12. Chuilin Lai, Zhengping Zhou, Lifeng Zhang, Xiaoxu Wang, **Qixin Zhou**, Yong Zhao, Yechun Wang, Xiangfa Wu, Zhengtao Zhu, Hao Fong, "Free-standing and mechanically flexible mats consisting of electrospun carbon nanofibers made from a natural product of alkali lignin as binder-free electrodes for high-performance supercapacitors," ***Journal of Power Sources*** 247 (2014), 134-141.
13. **Qixin Zhou**, Yechun Wang, "Comparisons of clear coating degradation in NaCl solution and pure water," ***Progress in Organic Coatings*** 76 (2013), 1674-1682.

14. **Qixin Zhou**, Yechun Wang, Dennis E. Tallman, Mark B. Jensen, "Simulation of SECM approach curves for heterogeneous metal surfaces," *Journal of The Electrochemical Society* 159 (2012), H644-H649.
15. **Qixin Zhou**, Yechun Wang, Gordon P. Bierwagen, "Influence of the composition of working fluids on flow-accelerated organic coating degradation: deionized water versus electrolyte solution," *Corrosion Science* 55 (2012), 97-106.
16. Tongfu Qin, Benxian Shen, Jichang Liu, **Qixin Zhou**, Yang Qu, "The biodegradation kinetics of refining wastewater by microorganism UBD," *Petroleum Science & Technology* 30 (2012), 1823-1829.
17. **Qixin Zhou**, Yechun Wang, Fardad Azarmi, "A topography characterization of organic coatings degradation under flowing deionized water," *Journal of Materials Science & Engineering A* 1 (2011), 599-606.
18. Ronghua Yu, **Qixin Zhou**, Yechun Wang, Chao You, "Impedance-based wireless sensor network for metal-protective coating evaluation," *International Journal of Measurement Technologies & Instrumentation Engineering* 1 (2011), 25-39.
19. Tongfu Qin, Benxian Shen, Jichang Liu, **Qixin Zhou**, "A kinetics study of biodegrading petrochemical wastewater by microorganism UBD," *Petroleum Processing & Petrochemicals* 42 (2011), 57-60.
20. **Qixin Zhou**, Benxian Shen, "Biodegradation potential and influencing factors of a special microorganism to treat petrochemical wastewater," *Petroleum Science & Technology* 28 (2010), 135-145.
21. Tongfu Qin, Benxian Shen, **Qixin Zhou**, Jichang Liu, "Study on the biodegradation of refining wastewater by microbial immobilized UBD cells," *Petroleum Processing & Petrochemicals* 41 (2010), 68-70.
22. Tongfu Qin, Benxian Shen, Yang Qu, **Qixin Zhou**, Jichang Liu, "Study on refinery wastewater biodegradation in airlift inner-loop three-phase fluidized bed bioreactor," *Petrochemical Technology & Application* 28 (2010), 410-414.
23. **Qixin Zhou**, Tongfu Qin, Benxian Shen, "Analysis on effective factors of biodegrading refinery waste water by bacteria SEPZ," *Petrochemical Technology & Application* 27 (2009), 162-165.

Book Chapters

1. Shengxi Li, **Qixin Zhou**, Hongbo Cong, "Electrochemical techniques, impedance, and spectroscopy," Chapter of "Handbook of advanced non-destructive evaluation" editors by Nathan Ida and Norbert Meyendorf, Springer, 2018.

Patents

1. Haoran Wang, **Qixin Zhou**, "Synthesis of bio-based polyols from epoxidized cardanol and epoxidized triglyceride by using thiol-containing reagents," US patent number: 62/669,051, 62/841,941.
2. Haichang Zhang, **Qixin Zhou**, Zhifeng Deng, Weixiu Zeng, "Stimuli-responsive color-changing functional coating, preparation method and application thereof," US patent number: 16/259,125.

3. **Qixin Zhou**, Haoran Wang, “Modified cardanol as the reactive diluents for alkyd coating,” US patent number: 62/805,571.

Conference Proceedings

At The University of Akron (2014 Aug. – Present):

1. **Qixin Zhou***, Haoran Wang, Sinuo Lang, “Self-healing coating development by encapsulation of linseed oil in PUF,” *Proceedings of DoD-Allied Nations Technical Corrosion Conference 2017*, August 7-10, 2017, Birmingham, USA.

Prior to The University of Akron:

2. **Qixin Zhou**, Yechun Wang, “Flow accelerated degradation of corrosion protective organic coatings,” *Proceedings of ASME International Mechanical Engineering Congress & Exposition 2013*, November 15-21, 2013, San Diego, USA.
3. Kevin M Beussman, Yechun Wang, Wei Y Lim, **Qixin Zhou**, “Dynamics of viscous droplets falling towards micro-patterned solid surfaces,” *Proceedings of ASME International Mechanical Engineering Congress & Exposition 2013*, November 15-21, 2013, San Diego, USA.
4. **Qixin Zhou**, Yechun Wang, Gordon P. Bierwagen, “Flow-accelerated coating degradation: influence of the composition of working fluids,” *Proceedings of NACE Corrosion 2012*, March 11-15, 2012, Salt Lake City, USA.
5. **Qixin Zhou**, Yechun Wang, Gordon P. Bierwagen, “Flowing fluid accelerated degradation of metal-protective coatings,” *Proceedings of AIChE’s Annual Meeting 2010*, November 7-12, 2010, Salt Lake City, USA.

PRESENTATIONS

*: corresponding author

†: presenter

Name: graduate student in Dr. Qixin Zhou’s group

Oral Presentations at National & International Conference Meetings

At The University of Akron (2014 Aug. – Present):

1. Cheng Zhang†, **Qixin Zhou**, “High bio-based carbon content polyurethane dispersions synthesized from fatty acid-based isocyanate,” *2019 NACE Corrosion*, March 24-28, 2019, Nashville, Tennessee, USA.
2. Haoran Wang†, **Qixin Zhou**, “High solid alkyd coatings by using cardanol-based reactive diluents,” *2019 NACE Corrosion*, March 24-28, 2019, Nashville, Tennessee, USA.
3. Weixiu Zeng†, **Qixin Zhou**, “Enhanced UV stability of Epoxy Coatings by incorporating DPP pigments,” *2018 NACE Corrosion*, April 15-19, 2018, Phoenix, Arizona, USA.
4. **Qixin Zhou**†, Haoran Wang, “Development of linseed oil based self-healing coatings to improve corrosion protection,” *2018 TMS conference*, March 11-15, 2018, Phoenix, Arizona, USA. Invited talk
5. **Qixin Zhou**†, “Smart and sustainable coating development for corrosion protection,”

- 2018 Lubrizol Advanced Research and Network technical seminar*, February 22, 2018, Brecksville, Ohio, USA. Invited talk
6. Haoran Wang, **Qixin Zhou**⁺, “Development of self-healing coatings by linseed oil encapsulation,” *2018 SSPC Annual Meeting*, January 15-18, 2018, New Orleans, Louisiana, USA.
 7. Yang Zhou, **Qixin Zhou**, Ali Dhinojwala, Mark D. Foster, “Plasma polymerized coatings as primer to increase corrosion resistance,” *2017 Materials Research Society Fall Meeting & Exhibit*, November 26-December 1, 2017, Boston, Massachusetts, USA.
 8. Haoran Wang⁺, **Qixin Zhou**, “Effect of TEOS oligomer on the cathodic disbondment of epoxy polyamine coating,” *2017 MS&T conference*, October 8-12, 2017, Pittsburg, Pennsylvania, USA.
 9. **Qixin Zhou**⁺, Haoran Wang, Sinuo Lang, “Self-healing coating development by encapsulation of linseed oil in PUF,” *2017 DoD-Allied Nations Technical Corrosion Conference*, August 7-10, 2017, Birmingham, Alabama, USA.
 10. **Qixin Zhou**⁺, Sinuo Lang, “Development of self-healing coating based on microcapsules for corrosion protection,” *2017 NACE Corrosion*, March 26-30, 2017, New Orleans, Louisiana, USA.
 11. Sinuo Lang⁺, **Qixin Zhou**, “Development of microcapsule based self-healing coating for corrosion protection,” *2016 MS&T Conference & Exhibition*, October 23-27, 2016, Salt Lake City, Utah, USA.
 12. Sinuo Lang, **Qixin Zhou**⁺, “Development on microcapsule based self-healing polymer coatings for corrosion protection,” *2015 AIChE’s Annual Meeting*, November 8-13, 2015, Salt Lake City, Utah, USA.

Prior to The University of Akron:

13. **Qixin Zhou**⁺, Yechun Wang, “Flow accelerated degradation of corrosion protective organic coatings,” *2013 ASME International Mechanical Engineering Congress & Exposition*, November 15-21, 2013, San Diego, CA, USA.
14. **Qixin Zhou**⁺, “Accelerated degradation of corrosion protective organic coatings by flowing fluids,” *Department of Coating & Polymeric Materials*, NDSU, April 5, 2013, invited talk.
15. **Qixin Zhou**⁺, Yechun Wang, Gordon P. Bierwagen, “Flow-accelerated coating degradation: influence of the composition of working fluids,” *2012 NACE Corrosion*, March 11-15, 2012, Salt Lake City, Utah, USA.
16. **Qixin Zhou**⁺, Yechun Wang, Gordon P. Bierwagen, “Degradation of organic coatings in deionized water and NaCl solution,” *2011 AIChE’s Annual Meeting*, October 16-21, 2011, Minneapolis, Minnesota, USA.
17. **Qixin Zhou**⁺, Yechun Wang, Gordon P. Bierwagen, “Flowing fluid accelerated degradation of metal-protective coatings,” *2010 AIChE’s Annual Meeting*, November 7-12, 2010, Salt Lake City, Utah, USA.

Poster Presentations at Regional, National & International Conference Meetings

At The University of Akron (2014 Aug. – Present):

1. Cheng Zhang, **Qixin Zhou**, “Renewable anticorrosion waterborne polyurethane from

- dimer fatty acid-based isocyanate,” *2019 Sink Or Swim Cleveland Coatings Society conference*, June 4-5, 2019, Cleveland, Ohio, USA. **Best Student Award/Second Place**
2. Haoran Wang, **Qixin Zhou**, “Synthesis and application of modified cardanol as reactive diluents for alkyd coating,” *2019 Sink Or Swim Cleveland Coatings Society conference*, June 4-5, 2019, Cleveland, Ohio, USA. **Best Student Award/Second Place**
 3. Cheng Zhang, **Qixin Zhou**, “Renewable anticorrosion waterborne polyurethane from dimer fatty acid-based isocyanate,” *2019 Eastern Coating Show*, May 13-16, 2019, Atlantic City, New Jersey, USA.
 4. Haoran Wang, **Qixin Zhou**, “Synthesis and application of modified cardanol as reactive diluents for alkyd coating,” *2019 Eastern Coating Show*, May 13-16, 2019, Atlantic City, New Jersey, USA.
 5. Weixiu Zeng, **Qixin Zhou**, “A new color-changing coating prepared by incorporating 1,4-BDF pigments into epoxy polyamine system,” *2019 Eastern Coating Show*, May 13-16, 2019, Atlantic City, New Jersey, USA.
 6. Cheng Zhang, **Qixin Zhou**, “Renewable anticorrosion waterborne polyurethane from dimer fatty acid-based isocyanate,” *2019 CoatingsTech Conference*, April 8-10, 2019, Cleveland, Ohio, USA.
 7. Haoran Wang, **Qixin Zhou**, “Synthesis and application of modified cardanol as reactive diluents for alkyd coating,” *2019 CoatingsTech Conference*, April 8-10, 2019, Cleveland, Ohio, USA. **First Place Award**
 8. Weixiu Zeng, **Qixin Zhou**, “A new color-changing coating prepared by incorporating 1,4-BDF pigments into epoxy polyamine system,” *2019 CoatingsTech Conference*, April 8-10, 2019, Cleveland, Ohio, USA.
 9. Cheng Zhang, **Qixin Zhou**, “High bio-based carbon content polyurethane dispersions synthesized from fatty acid-based isocyanate,” *2019 NACE Corrosion*, March 24-28, 2019, Nashville, Tennessee, USA.
 10. Haoran Wang, **Qixin Zhou**, “High solid alkyd coatings by using cardanol-based reactive diluents,” *2019 NACE Corrosion*, March 24-28, 2019, Nashville, Tennessee, USA.
 11. Cheng Zhang, **Qixin Zhou**, “Renewable anticorrosion waterborne polyurethane from dimer fatty acid-based isocyanate,” *2019 SSPC Annual Meeting*, February 11-14, 2019, Orlando, Florida, USA.
 12. Weixiu Zeng, **Qixin Zhou**, “1,4-BDF pigment-based color-changing epoxy coating,” *2019 SSPC Annual Meeting*, February 11-14, 2019, Orlando, Florida, USA.
 13. Cheng Zhang, **Qixin Zhou**, “Preparation and characterization of microcapsules based self-healing coatings containing epoxy ester as healing agent,” *2018 Sink Or Swim Cleveland Coatings Society conference*, June 5-6, 2018, Cleveland, Ohio, USA. **Best Student Award/First Place**
 14. Weixiu Zeng, **Qixin Zhou**, “Enhanced UV stability of epoxy coatings by incorporating DPP pigments,” *2018 NACE Corrosion*, April 15-19, 2018, Phoenix, Arizona, USA.
 15. Haoran Wang, **Qixin Zhou**, “Synthesis of cardanol-based polyols via thiol-ene/epoxy click reactions for polyurethane coatings application,” *2018 American Coating Show*, April 10-12, 2018, Indianapolis, Indiana, USA.
 16. Cheng Zhang, **Qixin Zhou**, “Poly(urea-formaldehyde) microcapsules containing epoxy ester for self-healing coatings,” *2018 American Coating Show*, April 10-12, 2018, Indianapolis, Indiana, USA.
 17. Weixiu Zeng, **Qixin Zhou**, “Development of DPP pigmented epoxy coatings with

- enhanced UV resistance and corrosion resistance,” *2018 SSPC Annual Meeting*, January 15-18, 2018, New Orleans, Louisiana, USA.
18. Weixiu Zeng, **Qixin Zhou**, “Development of DPP pigmented epoxy coatings,” *2017 MS&T conference*, October 8-12, 2017, Pittsburg, Pennsylvania, USA.
 19. Haoran Wang, **Qixin Zhou**, “Development of self-healing coating based on microcapsules for corrosion protection,” *2017 NACE Corrosion*, March 26-30, 2017, New Orleans, Louisiana, USA.
 20. Sinuo Lang, **Qixin Zhou**, “Microcapsules based self-healing coatings for corrosion protection,” *2016 SSPC Annual Meeting*, January 18-21, 2016, San Antonio, Texas, USA.
 21. Sinuo Lang, **Qixin Zhou**, “Development on PUF-linseed oil microcapsules bases self-healing coatings for corrosion protection,” *2015 Department of Defense-Allied Nations Technical Corrosion Conference*, November 15-19, 2015, Pittsburgh, Pennsylvania, USA.

Prior to The University of Akron:

22. **Qixin Zhou**, Yechun Wang, “Flow promoted organic coating corrosion,” *2014 ND EPSCoR State Conference*, April 29, 2014, Grand Forks, North Dakota, USA.
23. **Qixin Zhou**, Yechun Wang, “Degradation of corrosion protective coatings by flowing fluids,” *3rd NDSU/UND/SDSU Engineering Conference*, April 23, 2013, Brookings, South Dakota, USA.
24. **Qixin Zhou**, Yechun Wang, “Flow accelerated degradation of organic coatings,” *4th Annual NDSU Graduate Research & Arts Forum*, April 11, 2013, Fargo, North Dakota, USA.
25. **Qixin Zhou**, Yechun Wang, “Degradation behavior of organic coatings immersed in flowing fluids,” *Symposium on Sustainable Materials & Light Driven Processes*, September 28-29, 2012, Fargo, North Dakota, USA.
26. **Qixin Zhou**, Yechun Wang, “Flow induced degradation of corrosion protective coatings,” *2nd NDSU/UND/SDSU Engineering Conference*, April 23, 2012, Grand Forks, North Dakota, USA.
27. **Qixin Zhou**, Yechun Wang, “Flow induced organic coating degradation,” *3rd Annual NDSU Graduate Research & Arts Forum*, April 11, 2012, Fargo, North Dakota, USA.
28. **Qixin Zhou**, Yechun Wang, “Flowing fluid accelerated organic coating degradation,” *2011 ND EPSCoR State Conference*, October 4, 2011, Fargo, North Dakota, USA.
29. **Qixin Zhou**, Yechun Wang, “Accelerated organic coating degradation via flowing fluids,” *2010 ASME International Mechanical Engineering Congress & Exposition*, November 12-18, 2010, Vancouver, British Columbia, Canada.
30. **Qixin Zhou**, Yechun Wang, “Degradation behavior of organic coatings in deionized water and NaCl solution,” *2010 ND EPSCoR State Conference*, September 29, 2010, Grand Forks, North Dakota, USA.
31. Ronghua Yu, Chao You, **Qixin Zhou**, Yechun Wang, “A new impedance-based wireless sensor system for coating evaluation,” *2010 ND EPSCoR State Conference*, September 29, 2010, Grand Forks, North Dakota, USA.

32. **Qixin Zhou**, Benxian Shen, “Biodegradation of petroleum hydrocarbons in petrochemical wastewater by an active microorganism,” *12th Asia-Pacific Confederation of Chemical Engineering Congress*, August 4-6, 2008, Dalian, Liaoning, China.

HONORS & AWARDS

- Love of Learning Scholarship, Phi Kappa Phi 2012
- Presidential Doctoral Graduate Fellowship (4 Years), NDSU, Fargo, ND 2009 — 2013
- NSF Student Travel Grant for ASME International Congress & Exposition 2010
- Outstanding Graduate Award of Shanghai, ECUST, China 2009
- NALCO Scholarship, ECUST, China 2008
- 1st Class Scholarship of ECUST (2 times) 2007 & 2008
- Outstanding Graduate Award of Anhui Province, HFUT, China 2006
- Special-Class Scholarship of HFUT (2 times) 2004 & 2005
- 2nd Class Scholarship of HFUT 2003
- Excellent Student Award (3 times), HFUT, China 2002 — 2005

STUDENT AWARDS

- Cheng Zhang, **SSPC Scholarship** for the 2019-2020 academic year, \$2500, June 2019
- Haoran Wang, **Best Student Award/Second Place** in Cleveland Coatings Society, 62th Annual Technical Symposium, Sink or Swim 2019 conference, \$200, June 2019
- Cheng Zhang, **Best Student Award/Second Place** in Cleveland Coatings Society, 62th Annual Technical Symposium, Sink or Swim 2019 conference, \$200, June 2019
- Haoran Wang, **First Place Award** in student posters symposium, 2019 CoatingsTech Conference, \$500, April 2019
- Weixiu Zeng, **CBE Department Outstanding Teaching Assistant Award**, \$300, December 2018
- Haoran Wang, **CBE Department Outstanding Teaching Assistant Award**, \$300, December 2018
- Haoran Wang, **CBE Department Outstanding Graduate Research Award** (Runner up), December 2018
- Cheng Zhang, **Best Student Award/First Place** in Cleveland Coatings Society, 61th Annual Technical Symposium, Sink or Swim 2018 conference, \$500, June 2018
- Cheng Zhang, **SSPC Scholarship** for the 2018-2019 academic year, \$2500, May 2018
- Weixiu Zeng, **SSPC Scholarship** for the 2018-2019 academic year, \$2500, May 2018
- Weixiu Zeng, **SSPC Scholarship** for the 2017-2018 academic year, \$2500, May 2017

STUDENT GRADUATED

Master Student

- Weixiu Zeng, thesis entitled “High performance organic pigments for one-coat epoxy coating with multi-functions”, defended in fall 2018, graduated in spring 2019

Undergraduate Students with Honor Projects

- Jovan Jevric, honor project entitled “Bio-based, waterborne non-isocyanate polyurethanes”, spring 2019
- Nicholas Pottschmidt, honor project entitled “Development of cardanol-based epoxy coating”, spring 2019
- Sarah Medeiros, honor project entitled “The influence of organic pigments on coating properties”, spring 2018
- Kyle Kraus, honor project entitled “Role of salt on coating failure”, spring 2017

TEACHING

Undergraduate Courses

- *Materials and Energy Balances (4200:200)* (Fall 2014)
- *Materials and Energy Balances for Corrosion Engineering (4250:200)* (Fall 2015, 16, 17, 18)
- *Aqueous Corrosion Lab 1 (4250:301)* (Fall 2014, 15, 16, 17,18)
- *Aqueous Corrosion Lab 2 (4250:306)* (Spring 2016)
- *Cathodic Protection & Organic Coatings* (4200:496)* (Spring 2015)
- *Corrosion Protection by Organic Coatings* (4200:496)* (Spring 2017, 18, 19)

Graduate Course

- *Corrosion Protection by Organic Coatings* (4200:696)* (Spring 2017, 18, 19)

*: new course developed

SYNERGISTIC ACTIVITIES

On-campus Service

- Department undergraduate advisor
- Department safety coordinator
- Department NACE scholarship committee member
- Thesis/dissertation committee (21 PhD students, 7 MS students)
- Undergraduate research advisor (7 undergraduate students)

Journal Reviewer for ~ 30 Journals

ACS Sustainable Chemistry &
Engineering
ASTM
Ceramics International

Colloid and Polymer Science
Corrosion
Corrosion Science
Dyes and Pigments

Electrochemistry Communications
Electrochimica Acta
Environmental Science &
Technology
Green Chemistry
Green Materials
Industrial & Engineering Chemistry
Research

Iranian Journal of Chemistry and
Chemical Engineering
JOM

Langmuir
Materials & Design
Materials Chemistry Frontiers
Materials Research
Materials Today Sustainable
PLOS ONE
Progress in Organic Coatings
Reactive and Functional Polymers
Smart Materials and Structures
Petroleum Science and Technology
The Electrochemical Society

Proposal Reviewer

- NSF STTR/SBIR program

Conference Chair

- Co-organizer: Substrate Protection for Corrosion Prevention, Symposium of the *2019 Materials Science & Technology Conference*, 2019, Portland, Oregon, USA.
- Chair: Research in Progress—Coatings & Inhibitors Symposium, *2019 NACE Corrosion*, 2019, Nashville, Tennessee, USA.
- Co-organizer: Advanced Coatings for Wear and Corrosion Protection, Symposium of the *2016 Materials Science & Technology Conference*, 2016, Salt Lake City, Utah, USA.

Committee member

- International Research Committee of the National Association of Corrosion Engineers (NACE)
- Active member of The Society for Protective Coatings (SSPC)