

## **Curriculum Vitae**

**Dean C. Webster**

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Department of Coatings and Polymeric Materials  
North Dakota State University  
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### **EDUCATION**

Ph.D., Materials Engineering Science, Virginia Polytechnic Institute and State University, March 1984.

B.S., Chemistry, Virginia Polytechnic Institute and State University, March 1979.

### **PROFESSIONAL APPOINTMENTS**

#### March 2013 to present

Founder, Renuvix LLC, Fargo, North Dakota

#### January 2012 to present

Professor and Chair, Department of Coatings and Polymeric Materials, North Dakota State University.

#### July 2023 to present

Director, Center for Bioplastics and Biocomposites (CB2), a NSF Industry-University Cooperative Research Center (IUCRC).

#### January 2012 to June 2020

Director, Center for BioBased Materials Science and Technology (BiMAT), a North Dakota Center of Research Excellence (CORE).

#### August 2001 to January 2012

Professor, Department of Coatings and Polymeric Materials, North Dakota State University. Tenured 2007.

#### January 1993 to August 2001

Eastman Chemical Company, Kingsport, Tennessee.

August 1984 to December 1992

Sherwin-Williams Company, Chicago, Illinois.

March 1979 to August 1984

Graduate Research Assistant, Chemistry Department, Virginia Polytechnic Institute and State University.

**TEACHING EXPERIENCE**

North Dakota State University

CPM 474/674 Applied Polymer Science (Coatings I). Fall 2001 – 2024.

CPM 484/684 Coatings I Laboratory. Fall 2002 – 2024.

CPM 475/675 Coatings' Materials Science (Coatings II). Spring 2020 – 2024.

CPM 485/685 Coatings II Laboratory. Spring 2002, 2003, 2004, 2005, 2006.

CPM 778 Physical Chemistry of Polymers (portions). Spring 2002.

CPM 773 Organic Chemistry of Coatings. Spring 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2019, 2021, 2023.

NDSU Coatings Science Short Course, June 2002-2019, 2022-2024.

Department of Chemistry, DePaul University, Chicago, Illinois.

CHE 462 Coatings Technology II. Fall 1985, 1987, 1989, and 1991.

Instructor in "Front Line Leadership" supervisory development program at Sherwin-Williams.

**AWARDS**

Fellow of the National Association of Inventors, 2025.

NDSU College of Science and Mathematics Excellence in Research Award, 2021.

James A. Meier Senior Professor, NDSU College of Science and Mathematics, 2019-2022.

Fellow, Division of Polymeric Materials: Science and Engineering, American Chemical Society, 2019.

Fellow, American Chemical Society, 2016.

Roon Foundation Award (best paper), 2016 American Coatings Conference.

Fred Waldron Research Award, NDSU Alumni Foundation, 2015.

Mattiello Memorial Lecture Award, American Coatings Association, 2013.

Roon Foundation Award (best paper), 2012 American Coatings Conference.

Roy W. Tess Award in Coatings, PMSE Division American Chemical Society, 2011.

Industry Achievement Award, National Paint and Coatings Association, 2009.

Roon Foundation Award (best paper), 2008 FutureCoat Conference.

Roon Foundation Award (best paper), 2006 International Coatings Exposition.

Roon Foundation Award (best paper), 2004 International Coatings Exposition.

*Technical Focus Speaker* (Invited keynote), 2004 International Coatings Exposition.

Roon Foundation Award (best paper), 2003 International Coatings Exposition.

Best Poster Presentation, 2003 International Coatings Exposition

#### **OTHER PROFESSIONAL ACTIVITIES**

**2019 – Present** Editorial Board, *Progress in Organic Coatings*

**2013-Present** Editorial Board, *Biofouling*

**2011-2018** Editor-in-chief, *Progress in Organic Coatings*

**2012-Present** Councilor, American Chemical Society, representing PMSE Division Divisional Activities Committee (DAC); Meetings and Expositions Committee

**2012** International Scientific Committee, International Conference on Bioinspired and Biobased Chemistry and Materials, Nice, France, October 3-5, 2012.

**2008-2014** Organizing Committee, Coatings Science International Conference, Netherlands (Annual).

**2009** Past Chair, Division of Polymeric Materials: Science and Engineering, American Chemical Society

**2008** Chair, Division of Polymeric Materials: Science and Engineering, American Chemical Society

**2007** Chair Elect, Division of Polymeric Materials: Science and Engineering, American Chemical Society

**2006** Vice-Chair, Division of Polymeric Materials: Science and Engineering, American Chemical Society

<b>2003 - 2005</b>	Board of Directors, NDSU Research Foundation
<b>2002-2003, 2005-2006</b>	NDSU University Senate
<b>2005-2008</b>	Mattiello Memorial Lecture Committee (FSCT) (Chair 2008)
<b>2003 - 2010</b>	Member, Faculty Advisory Group, NDSU Center for Nanoscale Science and Engineering
<b>2002 - 2010</b>	Professional Development Committee, Federation of Societies for Coatings Technology
<b>2003 - 2006</b>	Member At Large, Polymeric Materials: Science and Engineering Division, American Chemical Society.
<b>1999 - 2000</b>	Editor of <i>Organic Coatings Digest</i> for <i>Progress in Organic Coatings</i> .
<b>1998 - 2000</b>	Moderator of the <i>Organic Coatings Forum</i> e-mail discussion group sponsored by <i>Progress in Organic Coatings</i> .
<b>1998 - 2011</b>	Editorial board of <i>Progress in Organic Coatings</i> .
<b>1998 - Present</b>	Advisory Council, Chemistry Department, Virginia Polytechnic Institute and State University.
<b>1998 - 2003</b>	Dean's Roundtable, College of Arts and Sciences, Virginia Polytechnic Institute and State University.
<b>1998 - 2001</b>	Board of Directors, Skycrafters, Inc., Blountville, TN (1998-2001). President, 1999-2001. 501c(7) Corporation
<b>1998</b>	Technician of the Year selection committee, Northeast Tennessee Section, ACS.
<b>1997 - 1998</b>	Finance Chair, National Chemistry Week, Northeast Tennessee Section, ACS.
<b>1994 - 2001</b>	Public Outreach, NE Tennessee Section American Chemical Society/Eastman Chemical Company. Involved in educational outreach in local schools. Presented chemistry demonstrations to elementary school children, etc.
<b>1991</b>	Chair, Sherwin-Williams Technical Symposium.
<b>1989</b>	Organizing Committee, Sherwin-Williams Technical Symposium
<b>1979</b>	Organized the first Undergraduate Research Symposium at Virginia Tech.

## MEMBERSHIPS IN ORGANIZATIONS

American Chemical Society  
Polymer Chemistry Division, ACS  
Polymeric Materials: Science and Engineering Division, ACS  
Small Chemical Business, ACS  
American Oil Chemists' Society  
American Coatings Association (formerly Federation of Societies for Coatings Technology,  
FSCT)  
RADTECH  
Materials Research Society

**FUNDING RECEIVED**

<b>Title</b>	<b>Agency</b>	<b>coPIs</b>	<b>Amount</b>	<b>Period</b>
Ice Control Enhancement with Closed Loop Molecular Design (ICECycle)	UMichigan/DARPA	Anish Tuteja (Michigan), (UMinn), (Raytheon)	\$1,500,000	1/26/2024 – 12/31/2025
Using Artificial Intelligence (AI) and Machine Learning (ML) for Designing Functional Coatings	Office of Naval Research	Andrew Croll, Bakhtiyor Rasulev, Wenjie Xia, Anish Tuteja	\$4,821,764	12/1/2023 – 11/30/2026
Fully Non-isocyanate Next-generation Polyurethane Topcoats	Luna Labs/SERDP	Adam Goff	\$73,588	10/17/2023 – 3/31/2025
Engineering low VOC, Intumescence Fire Protective Coatings for Military Infrastructure	U.S. Army (DOD Army) (CERL/ERDC)	Mohiuddin Quadir	\$268,856	9/15/2023 – 9/15/2025
Acquisition of an Armfield FT66-D to Complete a refinery for Crude Vegetable Oils/Novel Specialty Oil Varieties	National Institute of Food & Agriculture (USDA NIFA)	Ewumbua, David Boehm, Bingcan Chen	\$204,270	9/1/2023 – 8/31/2027
Soy Based Biodegradable Super-Absorbents for Personal Care and Agricultural Products	ND Soybean Council (NDSC)	Olena Shafranska	\$36,811	7/1/2023 – 6/30/2023
Exploration of Bio-based functional building blocks for durable coatings	Center for Bioplastics/Biocomposites	Mukund Sibi	\$84,084	01/01/2023 – 4/30/2024
Accelerated Biological Laboratory Performance Testing of Non-Toxic Marine Coatings	Office of Naval Research	Shane Stafslie	\$235,000	1/1/2023 – 12/31/2025
Understanding the Principles of Solid Shedding Surfaces – Phase III	Office of Naval Research	Andrew Croll, Anish Tuteja	\$4,536,000	01/01/2023 – 12/31/2025
Initial investigation of cotton plant derived synthetic leather	Cotton, Inc.	Long Jiang	\$154,535	1/1/2022 – 12/31/2023
Synthesis of novel biomass-derived plastics using photoenergy	USDA/NIFA/Sungrant	Qianli Chu (UND)	\$108,280	8/1/2021 – 7/31/2025
Understanding the Principles of Solid Shedding Surfaces – Phase II	Office of Naval Research	Andrew Croll, Bakhtiyor Rasulev, Wenjie Xia, Anish Tuteja	\$4,726,763	01/01/2022 – 12/31/2024

Exploration of Bio-based functional building blocks for durable coatings	Center for Bioplastics/Biocomposites	Mukund Sibi	\$77,395.50	01/01/2022 – 12/31/2022
Expanded use of soy-based oil pretreatment of recycled rubber crumb in automotive parts	United Soybean Board		\$45,267	12/01/2021 – 11/30/2022
Preliminary exploration of poly lignin biomass for non-isocyanate rigid foams	Plain Sight Innovations	Chad Ulven	\$9998	09/15/2021 – 03/14/2022
Soy-based biodegradable agricultural mulching materials	ND Soybean Council/SBARE		\$34,310	7/1/2021 – 6/30/2022
Cottonseed oil based vitrimers for 3D printing and other applications	Cotton, Inc.	Long Jiang (PI)	\$56,383	01/01/2021-12/31/2021
Glycidyl carbamate resin systems for coatings	Elinor Specialty Coatings		\$51,000	11/01/2020-04/30/2022
Modified high oleic soybean oil to increase the use of recycled crumb rubber	Ford/USB		\$57,273	10/1/2020-09/30/2021
Understanding the Principles of Solid Shedding Surfaces	Office of Naval Research	Andrew Croll, Anish Tuteja	\$5,792,117	08/20/2020 – 08/19/2023
Soybean oil-based additives for low-friction rubber compounds	ND Soybean Council		\$31,661	07/01/2020 – 06/30/2021
Production and characterization of epoxidized sucrose and maltose esters of corn oil	ND Corn Council	Ewumbua Monono (PI)	\$89,954	07/01/2020-06/30/2022
Robust coatings with amphiphilic surfaces for control of biofouling	Office of Naval Research		\$460,000	03/01/2020 – 02/28/2024
Comprehensive biological laboratory efficacy testing of marine coatings	Office of Naval Research	Shane Stafslie	\$300,000	01/01/2020 – 12/31/2023
Cottonseed Oil based UV Curable Resins for Composites and 3D Printing	Cotton, Inc.	Long Jiang (PI)	\$43,414	01/01/2020 – 12/31/2020
Soybean oil in automotive EPDM rubber applications	Ford/USB		\$51,093	10/1/2019 – 09/30/2020
High performance bio-based polymers for coatings & additive manufacturing	Army Research Laboratory	Chad Ulven (PI), Mukund Sibi	\$5,177,264	04/10/2019 – 12/31/2024
High oleic soybean oil industrial uses and properties	Ford/USB		\$62,664	10/1/2018 – 9/30/2019
High oleic soybean oil as a plasticizer for crumb rubber for new rubber compounds	United Soybean Board	Olena Shafranska	\$98,086	10/1/2018 – 09/30/2019
Polymers & Adhesives for stone conservation	National Center for Preservation Technology and Training		\$83,000	8/06/2018 – 12/31/2022

High oleic soybean oil in automotive rubber applications	Ford/USB		\$61,684	10/1/2017 – 9/30/2018
High oleic soybean oil as a plasticizer for crumb rubber for tire tread compounds	United Soybean Board		\$97,525	10/1/2017 – 9/30/2018
New uses for polymers in stone conservation	National Center for Preservation Technology and Training		\$41,144	8/18/2017 – 12/31/2018
Glycidyl carbamate resin technology	Covestro LLC		\$152,169	7/1/2017 – 12/31/2019
Amphiphilic, siloxane-based fouling-release coatings for oil boom applications and comprehensive, biological laboratory efficacy testing	Office of Naval Research	Shane Stafslie	\$500,000	1/1/2017 – 12/31/2018
Modified soybean oil in Automotive Rubber Applications	Ford/United Soybean Board		\$77,851	10/1/2016 – 9/30/2017
BioBased Monomer and Polymer Systems for Coatings	AkzoNobel	Mukund Sibi Dean Webster	\$150,000	10/1/2016 – 6/30/2020
Novel tough and durable AF/FR coatings via self-stratification	Office of Naval Research		\$497,124	9/30/2016 – 10/1/2019
High Performance Bio-based Non-isocyanate Polymer Material Systems	U. S. Army	Chad Ulven Dean Webster, Mukund Sibi	\$480,000	9/27/2016 – 9/26/2019
Development of Coating Formulation for Stone Conservation	National Center for Preservation Technology and Training		\$41,000.45	9/14/2016 – 12/31/2017
Highly flexible primer for aircraft	Luna Innovations/Air Force		\$20,000	7/1/2016 – 3/1/2017
Screening Latex Coatings Formulations	Sherwin-Williams	Xiaoning Qi	\$50,000	2/1/2016 – 5/31/2017
Exploration of Novel Biobased Chemicals in Coatings Systems	Zymergen, Inc./DARPA		\$360,000	9/23/2015 – 7/17/2020
Center for Sustainable Materials Science – Subaward	NSF-EPSCoR		\$795,767	8/1/2014 – 7/31/2019 (in fourth year of a five-year program)
Dakota Bioprocessing Consortium – Subaward	NSF		\$384,556	8/2/2014 – 7/31/2016
BiMAT: Center for Biobased Materials Science and Technology	North Dakota Department of Commerce		\$1,132,500	7/1/2013 – 6/30/2018
Scale-up of novel soybean based materials – Subaward	ND Soybean Council		\$30,462	7/1/2013 – 6/30/2014



High Performance Soybean-based Thermosetting Materials	renewal, United Soybean Board		\$77,458	1/1/13 – 12/31/13
Sustainable Materials Science – Subaward	NSF-EPSCoR		\$436,023	9/1/2012 – 8/31/2014
Tailoring the surface properties of coatings through self-stratification	Office of Naval Research		\$480,954	5/15/2012 – 5/14/2015
Succinic acid based polyester polyols and their applications	BioAmber		\$104,214	3/12/2012 – 8/31/2014
High Performance Soybean-based Thermosetting Materials	renewal, United Soybean Board		\$63,308	1/1/12 – 12/31/12
Doctoral Dissertation Fellowship for Erin Pavlacky	ND EPSCoR		\$9680	8/16/2011 – 2/15/2012
Structural composites with high biobased content	National Science Foundation	Chad Ulven	\$300,000	8/15/2011 – 7/31/2014
High Performance Soybean-based Thermosetting Materials	United Soybean Board		\$69,560	1/1/11- 12/31/11
Marine Coatings Productization	Office of Naval Research	Larry Pederson, Bret Chisholm, Partha Majumdar, Shane Stafslie	\$2,715,650	10/1/2010 – 12/31/2011
Durable Soy-based Thiol-ene and Thiol-urethane Thermoset Coatings	North Dakota Soybean Council		\$40,000	7/1/2010 – 6/30/2011
Development of Biobased Raw Materials into Composites	ND Centers of Excellence	Wayne Seames, Chad Ulven	\$140,000	1/1/2009 – 12/31/2011
Synthesis and Characterization of Polyurethane Dispersions based on Novel Polyols	Novomer		\$35,597	9/28/2009 – 9/30/2010
State EPSCoR Product Design Center Award	ND EPSCoR		\$6,000	8/1/2009 – 4/1/2010
ND DOE EPSCoR IIP Phase 2: Performance impacts of impurities in Clean Coal Systems Equipped with Carbon Capture Technologies	DOE EPSCoR		\$102,288	7/15/2009- 7/14/2012
EPSCoR DOE Match Award	ND EPSCoR		\$13,500	7/1/2009 – 7/14/2012
Binder System for High Flexibility Primers based on Glycidyl Carbamate Resins	Luna Innovations/Air Force (STTR Phase II)		\$225,000	7/1/2009 – 6/30/2011
Doctoral Dissertation Fellowship for Samali Datta	ND EPSCoR		\$29,115	8/16/2008 – 8/15/2009

Novel Soybean Oil Based Thiol-Urethane Coatings	North Dakota Soybean Council		\$58,740	7/1/2009 – 6/30/2010
Marine Coatings Optimization, Phase II	Office of Naval Research	Gregory McCarthy, Bret Chisholm	\$1,535,000	9/1/2009 – 12/31/2010
Scientific Research Training Program for Ahn Hee Cheol	Kumgang Korea Chemical Co., Ltd.		\$35,107	8/16/2008 – 8/15/2009
Novel Soybean Oil based Ultraviolet Light Curable Coatings Materials	North Dakota Soybean Council	Zhigang Chen, Bret Chisholm	\$82,073	7/1/2008 – 6/30/2009
Marine Coatings Optimization	Office of Naval Research	Gregory McCarthy, Bret Chisholm	\$1,707,892	9/1/2008 – 12/31/2009
Doctoral Dissertation Fellowship for Ankit Vora	ND EPSCoR		\$9,033	7/1/2005 – 6/30/2008
Thermosetting Antifouling Coatings Binder Systems – Phase 2	Jotun Group Worldwide		\$174,813	11/1/2008 – 10/31/2009
Advanced Marine Coatings for Naval Vessels Phase VI	Office of Naval Research	Gregory McCarthy, Bret Chisholm	\$6,550,000	7/1/2007 – 12/31/2009
Advanced Marine Coatings for Naval Vessels Phase V	Office of Naval Research	Gregory McCarthy, Bret Chisholm	\$5,099,910	7/2006 – 12/2007
Smart Coatings Systems for Aerospace Applications	National Aeronautics and Space Administration (NASA)	Victoria Gelling, Stuart Croll	\$75,000	6/2006 – 7/2007
Corrosion Protection of Al Alloys for Aircraft by Coatings with Advanced Properties and Enhanced Performance	Air Force Office of Scientific Research	Gordon Bierwagen (PI), Stuart Croll	\$295,630 (Webster portion)	7/2005 – 6/2008
Novel Biobased Materials for Environmentally Compliant Protective Coating Systems	United States Department of Agriculture	Stuart G. Croll	\$464,079	9/15/2007 – 9/14/2010
Thermosetting Antifouling Coatings Binder System	Jotun Group Worldwide		\$180,382	5/1/2007 – 10/31/2008
Synthesis and characterization of flexible glycidyl carbamate functional polymers	Luna Innovations/Air Force (STTR Phase I Project)		\$31,778	
Spintronics	ND EPSCoR		\$117,853	8/1/2005 – 4/15/2008
Single-coat, zero VOC, non-skid system for ships, Phase II	Luna Innovations/US Navy (SBIR),		\$114,339	5/31/2005-9/1/2006
Single-coat, zero VOC, non-skid system for ships	Luna Innovations/US Navy (SBIR)		\$24,992	2/16/2004 – 9/26/2004
Chromium-free zero VOC primer	Luna Innovations/US Marines (SBIR)		\$17,498	3/25/2004 – 8/25/2004
Advanced Marine Coatings for Naval Vessels, Phase III.	Office of Naval Research	Philip Boudjouk,	\$5,200,600	4/1/2004 – 12/31/2005

Antifouling and fouling-release coatings for naval vessels		Thomas Ready, S.-B. Choi, Gregory McCarthy		
Advanced Marine Coatings for Naval Vessels, Phase II. Antifouling and fouling-release coatings for naval vessels	Office of Naval Research	Philip Boudjouk, Thomas Ready, S.-B. Choi, Gregory McCarthy	\$4,455,000	5/1/2003 – 6/30/2004
Development and understanding of the FSA Receptor Layer Polymer Material	NDSU Center for Nanoscale Science and Engineering	Stuart G. Croll	\$338,084	10/1/2002 – 6/30/2004
Doctoral Dissertation Fellowship for Heather Nash	ND EPSCoR		\$8,378	8/13/2003 – 12/31/2003

## PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Peter Allen, John A. Finlay, Anthony S. Clare, Dean C. Webster, "Investigation of Amphiphilic PDMS-Hyperbranched Polyglycerol Copolymers to Tune the Fouling-Release Properties in a Moisture Curable Coating System," *Langmuir*, 41, 3377-3391 (2025). <https://doi.org/10.1021/acs.langmuir.4c04338>
2. Fernando Gomez, Samuel F Roter, Daniel Rossi, Guangyao Wu, Maryam Safaripour, Dean Webster, Zhan Chen, "Molecular Structures of Surfaces and Interfaces of Poly(dimethylsiloxane) Incorporated with Silicone Oils Containing Phenyl Functionality," *Langmuir*, 41, 1985-1996 (2025). <https://pubs.acs.org/doi/10.1021/acs.langmuir.4c04566>
3. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr & Dean C. Webster, "Comparison of zwitterions in amphiphilic PDMS-based surface-modifying polymers for marine fouling-release coatings," *Journal of Coatings Technology and Research*, online (2025). <https://doi.org/10.1007/s11998-024-01023-1>
4. Marta-levheniia Vonsul, Renuka Dhandapani, Dean C. Webster, "Moving towards sustainability: Assessment of vitrimer behavior and reprocessability of plant oil-based material," *Polymer*, 317, 127941 (2025). <https://doi.org/10.1016/j.polymer.2024.127941>
5. Gerardo M Casanola-Martin, Anas Karuth, Hai Pham-The, Humbert González-Díaz, Dean C Webster, Bakhtiyor Rasulev, "Machine learning analysis of a large set of homopolymers to predict glass transition temperatures," *Communications Chemistry*, 7, 226- (2024). <https://doi.org/10.1038/s42004-024-01305-0>
6. Marta-levheniia Vonsul, Dean C. Webster, "Unlocking the potential of functionalized cottonseed oil for the production of biobased epoxy foams," *Ind. Crops & Prod.*, 222, Part 3, 119735 (2024). <https://doi.org/10.1016/j.indcrop.2024.119735>
7. Anas Karuth, Stephen Szwiec, Gerardo M Casanola-Martin, Achiya Khanam, Maryam Safaripour, David Boucher, Wenjie Xia, Dean C Webster, Bakhtiyor Rasulev, "Integrated machine learning, computational, and experimental investigation of compatibility in oil-modified silicone elastomer coatings," *Progress in Organic Coatings*, 193, 108526 (2024). <https://doi.org/10.1016/j.porgcoat.2024.108526>
8. Shokoofeh Ghasemi, Mukund Sibi, Dean C. Webster, Ghasideh Pourhashem, "Techno-Economic Assessment and Carbon Pricing Analysis for Economic Feasibility of Epoxidized Sucrose Soyate: A Biobased Thermoset Resin," *Journal of Cleaner Production*, 469, 143148 (2024). <https://doi.org/10.1016/j.jclepro.2024.143148>
9. Ivan Hevus, Sandip Tiwari, Sagar Thorat, Luke R. Gibbon, John J. La Scala, Chad A. Ulven, Mukund P. Sibi, Dean C. Webster, "Vanillin-Derived Veratrole Reactive Diluents in Stereolithography," *ACS Applied Polymer Materials*, 13, 7705-7715 (2024). <https://doi.org/10.1021/acsapm.4c01183>
10. Anas Karuth, Stephen Szwiec, Gerardo M. Casanola-Martin, Achiya Khanam, Maryam Safaripour, David Boucher, Wenjie Xia, Dean C. Webster, Bakhtiyor Rasulev, "Integrated machine learning, computational, and experimental investigation of compatibility in oil-modified silicone elastomer coatings," *Progress in Organic Coatings*, 193, 108526, (2024) <https://doi.org/10.1016/j.porgcoat.2024.108526>
11. Olena Shafranska, Catherine Sutton, Deep Kalita, Prakash Kannaboina, Sandip Tiwari, Mukund P. Sibi, Dean C. Webster, "A Preliminary Study of Thermosets from Epoxy Resins

- Made Using Low-Toxicity Furan-Based Diols," *Macro. Rapid Comm.*, 230065 (2024). <https://doi.org/10.1002/marc.202300665>
12. Md. Sanaul Huda, Michael Odegaard, Niloy Chandra Sarker, Dean C. Webster and Ewumbua Monono, "Enhancing recovery yield of vegetable oil methyl ester for bioresin production: a comparison study using acid neutralization," *ChemEngineering*, 8, 16 (2024). <https://doi.org/10.3390/chemengineering8010016>
  13. Dawei Zhang, Yang Wang, Maryam Safaripour, Daniel A. Bellido-Aguilar, Kurt R. Van Donselaar, Dean C. Webster, Andrew B. Croll and Wenjie Xia, "Energy renormalization for temperature transferable coarse-graining of silicone polymer," *Phys. Chem. Chem. Phys.*, 26, 4541-4554 (2024). <https://doi.org/10.1039/D3CP05969C>
  14. AliReza Rahimi, Joseph Dahlgren, Kinza Faiyaz, Shane J. Stafslie, Lyndsi VanderWal, James Bahr, Maryam Safaripour, John A. Finlay, Anthony S. Clare, Dean C. Webster, "Amphiphilic Balance: Effect of the Hydrophilic/Hydrophobic Ratio on Fouling-Release Surfaces," *Langmuir*, (2023) <https://doi.org/10.1021/acs.langmuir.3c03478>
  15. Ivan Hevus, Prakash Kannaboina, Yiqiu Qian, Jingbo Wu, Melody Johnson, Luke R. Gibbon, John J. La Scala, Chad Ulven, Mukund P. Sibi, Dean C. Webster, Furanic (Meth)acrylate Monomers as Sustainable Reactive Diluents for Stereolithography, *ACS Applied Polymer Materials*, (2023). <https://doi.org/10.1021/acsapm.3c02207>
  16. Kurt R. VanDonselaar, Daniel A. Bellido-Aguilar, Maryam Safaripour, Hyemin Kim, James J. Watkins, Alfred J. Crosby, Dean C. Webster, Andrew B. Croll; Silicone elastomers and the Persson-Brener adhesion model. *J. Chem. Phys.*; 159 (18): 184708 (2023). <https://doi.org/10.1063/5.0172415>
  17. Marta-levheniia Vonsul, Dean C. Webster, "Investigation of cottonseed oil as renewable source for the development of highly functional UV-curable materials," *Progress in Organic Coatings*, 185, 107883 (2023). <https://doi.org/10.1016/j.porgcoat.2023.107883>
  18. Raj Shankar Hazra, Jayanta Roy, Long Jiang, Dean C. Webster, Md. Mukhlesur Rahman, Mohiudding Quadir, "Biobased, macro- and nanoscale fungicide delivery approaches for plant fungi control," *ACS Applied BioMaterials*, 6, 2698-2711, (2023). <https://doi.org/10.1021/acsabm.3c00171>
  19. Ivan Hevus, Dean C. Webster, "Short-chain polyols from bio-based carboxylic acids for high-performance polyurethane coatings." *Progress in Organic Coatings*, 183, 107825 (2023). <https://doi.org/10.1016/j.porgcoat.2023.107825>
  20. Olena Shafranska, Joseph Dahlgren, Alexander Jones, Janice Tardiff, Dean C. Webster, "Differing Unsaturation Levels of Soybean Oils Impact the Properties of Peroxide-Vulcanized Carbon Black-Filled EPDM Rubber," *Journal of Applied Polymer Science*, 140, e53872 (2023). <https://doi.org/10.1002/app.53872>
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1. D. C. Webster, "Bio-based Polymers and Resins in Paints and Coatings," in *Bioplastics and Biocomposites: A Practical Introduction*, ed. D. Grewell, Royal Society of Chemistry, 2023, 79, ch. 10, pp. 249-273. <https://doi.org/10.1039/BK9781788010085-00249>
2. Dean C. Webster, "Paints, Varnishes, and Related Products," *Bailey's Industrial Oil and Fat Products* (7<sup>th</sup> Edition), F. Shahidi, ed., John Wiley & Sons, in press (2020). <https://doi.org/10.1002/047167849X.bio076.pub2>
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7. Dean C. Webster, Jackson Benda, "Use of amphiphilic surface modifying additives to improve performance of siloxane – polyurethane fouling - release coatings," U. S. Pat. No. 11,560,493 (2023).
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## **INVITED PRESENTATIONS**

1. "The potential synergism of high throughput experimentation with machine learning for complex material systems," DoD Energy Environment Innovation Symposium, December 2-6, 2024, Washington, DC, Oral Presentation.
2. "Crosslinking without isocyanates: epoxy functional polyurethanes enable rapid curing under ambient conditions, 9<sup>th</sup> KU-NDSU Joint Symposium, October 14-15, 2024, Fargo, N.D. Oral Presentation.
3. "Amphiphilic additives to tailor the surface properties of coatings to mitigate the adhesion of marine fouling organisms," National Meeting of the American Chemical Society, August 18-22, 2024, Denver, Co. Oral Presentation.
4. "Crosslinking without isocyanates: epoxy functional polyurethanes enable rapid curing under ambient conditions," National Meeting of the American Chemical Society, August 18-22, 2024, Denver, Co. Oral Presentation.
5. "Functional coatings to reduce adhesion of contaminants," DoD Energy and Environment Innovation Symposium, November 28-December 1, 2023, Alexandria, VA. Oral Presentation.
6. "Lignin-based thermosets via direct functionalization using an efficient and solvent-free valorization method," Materials Research Society Fall Meeting, November 27-December 1, 2023, Boston, MA. Oral Presentation.
7. "Designing Coatings that Resist Adhesion of Marine Fouling and Ice," 8<sup>th</sup> KU-NDSU Joint Symposium, November 6-7, 2023, Kagoshima, Japan. Virtual presentation.
8. "Alternative Crosslinking Polyurethanes (ACPU): Epoxy functional polyurethanes made with a "green" synthesis route," National Meeting of the American Chemical Society, August 12-17, 2023, San Francisco, CA. Oral Presentation.
9. "Furan-based diols and their (meth)acrylate and epoxy derivatives for coatings," Coatings Science International, Noordwijk, Netherlands, June 27 – 30, 2023. Oral Presentation.
10. "The transition to bio-based polymer materials: Challenges and Opportunities," 2023 Red River Valley ACS Research Conference, January 27-28, 2023. Oral presentation.
11. "Soy-based oils in rubber compounds for automotive parts," Workshop on "Improve Rubber Processability and performance with sustainable U.S. Soy," United Soybean Board, September 22, 2022. Virtual Presentation.



12. "Sustainable Polymer Coatings – Developments and the future," (with David Grewell), American Coatings Conference, April 5-7, 2022, Indianapolis, Indiana. Oral Presentation.
13. "Alternative Crosslinking Polyurethanes (ACPU): Novel synthesis of epoxy functional polyurethanes," Sidney Lauren Memorial Lecture, 49<sup>th</sup> Annual International Waterborne High-solids and Powder Coatings Symposium, New Orleans, Louisiana, February 21-23, 2022.
14. "Surfaces that resist adhesion: are there common features?" National Meeting of the American Chemical Society (Virtual), August 22-26, 2021.
15. "Exploration of amphiphilic additives in a siloxane-polyurethane fouling-release coating system," Coatings Science International (Virtual), June 29 – July 1, 2021.
16. "Using agriculture to make materials," AgBiotechAcademy, Fargo, ND, June 17, 2021.
17. "Use of agricultural and forestry products in thermosetting polymers," ARPA-E Carbon Negative Building Materials Workshop, virtual, March 23, 25, 2021.
18. "High modulus thermosets from highly functionalized biobased resins," NICE conference (Nature Inspires Creativity Engineers), Nice, France, (virtual presentation) October 12-14, 2020.
19. "Exploration of surface modifying amphiphilic additives in polyurethane coatings to mitigate bioadhesion of marine fouling organisms," National Meeting of the American Chemical Society (Virtual), August 17-20, 2020.
20. "High performance bio-based thermosets from high functionality resins," 43<sup>rd</sup> Annual Meeting of the Adhesion Society, Charleston, South Carolina, February 23-26, 2020.
21. "Toward sustainability in coatings technology: Progress, Opportunities, Barriers," The Waterborne Symposium, New Orleans, Louisiana, February 16 – 21, 2020. Plenary Lecture.
22. "Approaches to functional and high-performance bio-based materials," Seminar at Sherwin-Williams, Minneapolis, Minnesota, November 7, 2019.
23. "Thermosets from highly functionalized bio-based resins," The 9th ACS-PMSE/CCS-PD Joint Symposium on Polymers and Workshop, Xi'an, China, October 16-19, 2019.
24. "Approaches to non-isocyanate polyurethane coatings," The 9th ACS-PMSE/CCS-PD Joint Symposium on Polymers and Workshop, Xi'an, China, October 16-19, 2019.
25. "Thermosets from highly functionalized bio-based resins," Joint meeting of Northeast Tennessee Section of the American Chemical Society and American Institute of Chemical Engineering, September 17, 2019.
26. "Designing durable coatings with low surface adhesion for mitigation of fouling and ice adhesion," National Meeting of the American Chemical Society, San Diego, CA, August 25-29, 2019.

27. "Thermosets from highly functionalized bio-based resins," Seminar at Jiangnan University, Wuxi, China, July 22, 2019.
28. "Designing coatings to have low adhesion surfaces through self-stratification," Seminar at Jiangnan University, Wuxi, China, July 17, 2019.
29. "Highly functional bio-based resins for use in thermosets for coatings and composites," Seminar at KTH Royal Institute of Technology, Stockholm, Sweden, May 28, 2019.
30. "Combinatorial and High Throughput Methods to accelerate the development of coatings systems, National Meeting of the American Chemical Society, Washington, DC March 31 – April 4, 2019.
31. "Epoxidized sucrose esters as a platform technology for high performance thermosets," 10<sup>th</sup> Workshop on Fats and Oils as Renewable Feedstock for the Chemical Industry, Karlsruhe Institute of Technology, Germany, March 17-19, 2019.
32. "Approaches to functional and high performance bio-based materials," Dow Chemical Company, Collegeville, Pa., March 7, 2019.
33. "Amphiphilic siloxane-polyurethane self-stratified coatings for low fouling and ice adhesion," Silicon-containing Polymers and Composites, San Diego, Ca., December 16-19, 2018.
34. "Designing coatings to have low adhesion surfaces through self-stratification," 4<sup>th</sup> KU-NDSU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Kagoshima, Japan, October 31 – November 1, 2018.
35. "Thermosets from highly functionalized bio-based resins," N.I.C.E. Conference 2018, Nice, France, October 15-17, 2018.
36. "Designing coatings to have low adhesion surfaces through self-stratification, Harvard University, Cambridge, Mass., August 21, 2018.
37. "Designing coatings to have low adhesion surfaces through self-stratification," European Technical Coatings Congress, Amsterdam, Netherlands, June 26-29, 2018.
38. "Amphiphilic siloxane-polyurethane coatings for low fouling and ice adhesion," 19<sup>th</sup> International Congress on Marine Corrosion and Fouling, Melbourne, Fl., June 24-29, 2018.
39. "Epoxidized sucrose ester systems as a platform for sustainable thermosets," Polymers and Organic Chemistry Conference, Palavas Les Flots, France, June 3-7, 2018.
40. "Sustainable thermosets from highly functional bio-based resins," The Waterborne Symposium, New Orleans, LA, February 4-9, 2018.
41. "Highly functional bio-based resins for high performance thermosets," The Fiber Society 2017 Fall Meeting and Technical Conference and International Symposium on Materials from Renewables, Athens, GA, November 8-10, 2017.

42. "Coatings with amphiphilic surfaces via self-stratification for marine fouling-release applications," AVS International Symposium and Exhibition, Tampa, FL, October 31-November 3, 2017.
43. "Polymers and Coatings from Plants: Replacing petrochemicals with renewables," College of St. Benedict-St. John's University, St. Joseph, MN, October 24, 2017.
44. "Coming Full Circle: From linseed oil to alkyds to petrochemical resins and back again," National Meeting of the American Chemical Society, Washington, DC August 20-24, 2017.
45. "Impact of reactive group functionality on the properties of thermosets derived from vegetable oils," National Meeting of the American Chemical Society, Philadelphia, Pa., August 21-25, 2016.
46. "Optimizing surface properties of coatings through self-stratification," Forum for Future Coatings Science and Technology in memory of Professor Zeno Wicks, Nanchang, China, July 12-14, 2017.
47. "New approaches to bio-based polymer systems," Forum for Future Coatings Science and Technology in memory of Professor Zeno Wicks, Nanchang, China, July 12-14, 2017.
48. "Bio-based thermosets from star-like highly functional reactive resins," 3<sup>rd</sup> International Conference and Exhibition on Biopolymers & Bioplastics, San Antonio, Texas, September 12-14, 2016. Keynote talk.
49. "High performance, high bio-content thermosets for composites and coatings," 3<sup>rd</sup> International Conference and Exhibition on Biopolymers & Bioplastics, San Antonio, Texas, September 12-14, 2016. Workshop talk.
50. "Coatings from renewables: achieving performance," Coatings Science International 2016, Noordwijk, Netherlands, June 27 – July 1, 2016.
51. "Tough and durable amphiphilic fouling-release coatings," 18<sup>th</sup> International Congress on Marine Corrosion and Fouling, Toulon, France, June 19-24, 2016.
52. "Approaches to tough coatings that resist adhesion by marine fouling organisms," Keynote lecture, 39<sup>th</sup> Annual Meeting, The Adhesion Society, San Antonio, Texas, February 21-24, 2016.
53. "Tough and cleanable fouling-release marine coatings via self-stratification," Pacific Polymer Conference 14, Kawai, Hawaii, December 9 – 13, 2015.
54. "High-value bioproducts," NSF Food-Energy-Water Nexus Workshop, Rapid City, SD, October 19-20, 2015.
55. "High performance bio-based thermosets from highly functional reactive resins," NDSU-KU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Fargo, ND, October 15-16, 2015.
56. "Glycidyl carbamate functional resins: polyurethanes through epoxy chemistry," National meeting of the American Chemical Society, Boston, Ma., August 16-20, 2015.

57. "So we made all these polymers (materials), now what do we do with the data?", National meeting of the American Chemical Society, Boston, Ma., August 16-20, 2015.
58. "Lignin as a source of aromatic building blocks for materials Synthesis," ACS Green Chemistry and Engineering Conference, Bethesda, Md., July 14-16, 2015.
59. "High performance bio-based materials," Seminar at Jiangnan University, Wuxi, China, May 12, 2015.
60. "Marine Coatings," "Self-stratified Polyurethanes," "Non-isocyanate polyurethanes," Weg Paints, Brazil, February 24, 2015.
61. "Coatings Technology Short Course," Eastman Chemical Company, Kingsport, Tenn., January 19-21, 2015.
62. "Polymers from Plants: Replacing petrochemicals with renewables," Department of Chemistry Seminar, South Dakota State University, Brookings, South Dakota, February 18, 2015.
63. "Designing high performance biobased resin systems," Plenary Lecture at 3<sup>rd</sup> National Coatings Science and Technology Conference, Nanchang, China, October 26-28, 2014.
64. "Towards 100% Biobased Thermosets," Nice Conference on Bioinspired and Biobased polymers, Nice, France, October 15-17, 2014.
65. "Polymers and thermosets from renewable resources," CNRS, Charles Gerhardt Institute, University of Montpellier, Montpellier, France, October 13, 2014.
66. "Polymers and thermosets from renewable resources," Eastman Chemical Company, July 30, 2014.
67. "High modulus, high performance thermosets from renewable resources," From Anionic Polymerization to Aerospace Materials to Membranes workshop, June 29-July 2, 2014, Cetraro, Italy.
68. "Coatings Technology Short Course", Benjamin Moore Paints, May 19-23, 2014.
69. "High modulus thermosets from highly functional vegetable oil resins," Center for Sustainable Polymers Annual Meeting, University of Minnesota, Minneapolis, Minn., April 22, 2014.
70. "High functionality reactive resins based on vegetable oils," The 3<sup>rd</sup> International Symposium of Green MAP Institute and Life 3D-Printing Innovation Center, Yamagata University, Yonezawa, Japan, January 24-25, 2014.
71. "Improving the sustainability of thermosets using renewables, Thermoset Resin Formulators Associating, 2013 Annual Meeting, Newport, Rhode Island, September 29-October 1, 2013.
72. "High performance, high biocontent thermosets for composites and coatings," Green Chemistry and Engineering, Bethesda, Maryland, June 18-20, 2013.

73. "Fouling-release marine coatings via self-stratification," ANZPAC Workshop, Melbourne, Australia, May 6-9, 2013.
74. "Coatings based on renewables: the promise, potential, and pitfalls," CoatingsTech, Rosemont, Ill., March 12-13, 2013. Mattiello Memorial Lecture.
75. "High crosslink density biobased thermosets for coatings and composites," National meeting of the American Chemical Society, Philadelphia, Pa., August 19-23, 2012.
76. "Towards tough fouling-release coatings with tailorable surface composition," Plenary Lecture, International Congress on Marine Corrosion and Fouling, Seattle, Wa., June 24-28, 2012.
77. "Marine Coatings," Tutorial Lecture, American Coatings Conference, Indianapolis, In, May 7-9, 2012.
78. "Biobased high performance resins," American Coatings Conference, Indianapolis, In, May 7-9, 2012.
79. "Surface modification of coatings through self-stratification," Marine Coatings Conference, Berlin, Germany, February 28-29, 2012.
80. "Design and optimization of complex functional coatings systems," Evonik, Essen Germany, March 1, 2012.
81. "Novel biobased epoxy compounds: Epoxidized sucrose esters of fatty acid," Webinar for Akzo-Nobel, January 25, 2012.
82. "Novel approaches to protective and functional coatings systems," Evonik meets Science, Pittsburgh, Pa., December 8, 2011.
83. "Approaches to robust coatings with amphiphilic surfaces via self-stratification," National meeting of the American Chemical Society, Denver, Co., August 28 – September 1, 2011.
84. "Coatings Technology Short Course," Eastman Chemical Company, Kingsport, Tenn., October 17-20, 2011.
85. "Alkyd Resins," Webinar for Bayer MaterialScience, July 2011.
86. "Design and optimization of complex functional coating systems," FreeSlate Forum, San Francisco, Ca., April 2011.
87. "Epoxidized sucrose ester resins: a new highly functional biobased epoxy resin for thermosets," 4<sup>th</sup> Workshop on Fats and Oils as Renewable Feedstock for the Chemical Industry, Karlsruhe Institute of Technology, Germany, March 20-22, 2011.
88. "Correlation between lab assays and field testing results for siloxane-polyurethane fouling-release coatings," International Congress on Marine Corrosion and Fouling, Newcastle-Gateshead, UK, July 25-29, 2010.

89. "Tough fouling-release coatings based on self-stratification," International Congress on Marine Corrosion and Fouling, Newcastle-Gateshead, UK, July 25-29, 2010.
90. "Control over polymer structure, morphology and surface properties," American Coatings Conference, Charlotte, N.C., April 12-14-, 2010.
91. "Reducing the environmental impact of protective and functional coatings," American Chemical Society National Meeting, San Francisco, Ca., March 21-25, 2010.
92. "Tailoring the surface properties of coatings through self-stratification," American Chemical Society National Meeting, San Francisco, Ca., March 21-25, 2010.
93. "Self-stratified fouling-release coatings," European Coatings Conference – Marine Coatings II, Berlin, Germany, February 9-10, 2010.
94. "The use of glycidyl carbamate chemistry in coatings and other applications," 2009 Baekeland Symposium, Antalya, Turkey, November 22-25, 2009.
95. "Marine Coatings," Virtual Learning Conference, Federation of Societies for Coatings Technology, April 2, 2009.
96. "Accelerating the pace of research: The potential and challenges of high throughput experimentation in polymer science," The University of Iowa, February 26, 2009.
97. "Combinatorial and high throughput methods for the development of polymers and formulations," Procter & Gamble, Cincinnati, Oh., February 23, 2009.
98. "Approaches to Environmentally-Friendly Underwater Marine Coatings," Kyoto University, Kyoto, Japan, July 2008.
99. "Combinatorial and High Throughput Methods for the Development of Protective Coating Materials," Dow Corning Corporation, Midland, Mich., July 2008.
100. "The High-Throughput Approach to Designing New Functional Coating Systems," Symyx Global Symposium, Prague, Czech Republic, May 2008.
101. "Generation of experimental polymer structure-property data using combinatorial and high throughput methods," SPE Annual Technical Meeting, Milwaukee, Wis., May 2008.
102. "Coating Formulation Libraries," NIST NCMC Workshop, Gaithersburg, Md., April, 2008.
103. "Incorporation of Nanoparticles into Photopolymerized Polymer Films," NDSU Nanodays, Fargo, N.D., April 2008.
104. "Combinatorial and High Throughput Methods for the Development of Protective Coating Materials," Lord Corporation, Cary, N. C., March 2008.
105. "Chemistry with Robots: A new paradigm for research," Red River Valley Section of the American Chemical Society, Grand Forks, N. D., February 2008.

106. "Combinatorial and High Throughput Methods for the Development of Protective Coating Materials," L'Oreal, Paris, France, February 2008.
107. "High Performance, Low Surface Energy Polyurethanes for Underwater Marine Coatings," European Coatings Conference on Polyurethanes, Berlin, Germany, February 2008.
108. "High Throughput Methods for the Discovery and Optimization of Marine Coatings Systems," Bayer MaterialScience, Pittsburgh, Penn., October 2007.
109. "High Throughput Methods for the Discovery and Optimization of Marine Coatings Systems," Flanders Materials Science Center (FLAMAC) Workshop, Ghent, Belgium, September 2007.
110. "High Throughput Methods for the Discovery and Optimization of Marine Coatings Systems," BASF, Ludwigshafen, Germany, September 2007.
111. "Combinatorial and High Throughput Methods for the Development of Protective Coating Materials," Naval Research Laboratory, Washington, D.C., August 2007.
112. "Combinatorial and High Throughput Methods for the Development of Protective Coating Materials," IBM Almaden Research Labs, June 2007.
113. "Approaches to Environmentally-Friendly Underwater Marine Coatings," IUMACRO-07 Macromolecules for a Safe, Sustainable, and Healthy World, Brooklyn, NY, June 2007.
114. "Combinatorial and High Throughput Methods for the Development of Protective Coating Systems," Sherwin-Williams Company, Cleveland, Ohio, May 2007.
115. "Design of laser ablatable photopolymerizable polymer films," Materials Research Society Annual Meeting, San Francisco, Ca., April 2007.
116. "High throughput screening of compositional variables in a siloxane-urethane coatings systems for marine applications," Polymer Division, American Chemical Society Annual Meeting, Chicago, Illinois, March 2007.
117. "High Throughput Methods for Discovery and Optimization of Protective Coatings Systems," abc Technologies 2007, Basel, Switzerland, January 2007.
118. "New Developments in Anti-Fouling Marine Coatings," Polycondensation 2006, ACS Division of Polymer Chemistry, Koc University, Istanbul, Turkey, August 2006.
119. "Development Of Siloxane-Urethane Fouling-Release Coatings: Initial Screening Studies," 13<sup>th</sup> International Congress on Marine Corrosion and Fouling, Rio de Janeiro, Brazil, July 25, 2006.
120. "High Throughput Workflow For Developing New Antifouling And Fouling-Release Coating Systems," 13<sup>th</sup> International Congress on Marine Corrosion and Fouling, Rio de Janeiro, Brazil, July 24, 2006.

121. "The use of High Throughput Methods for the Development of Marine Coatings," 5<sup>th</sup> DPI Workshop on Combinatorial and High Throughput Approaches in Polymer Science, Technical University of Eindhoven, Eindhoven, Netherlands, June 27, 2006.
122. "High throughput experimentation in an academic environment," Symyx Symposium, Baltimore, Md., June 20, 2006.
123. "Non-Isocyanate Polyurethane Coatings Via Glycidyl Carbamate Chemistry," European Coatings Conference on Polyurethanes, Berlin, Germany, March 24, 2006.
124. "The Use Of High Throughput Methods To Design Fouling-Release Siloxane Urethane Coatings," NACE International (National Association of Corrosion Engineers), San Diego, Ca., March 13, 2006.
125. "High Throughput Synthesis and Screening Methods for the Design of Complex Coating Systems for Marine Applications," Materials Research Society Fall Meeting, Boston, Mass., November 29, 2005.
126. "Alternative Crosslinking Chemistry" and "High Throughput Methods in Coatings Science," YTC America, Camarillo, Ca., November 15, 2005.
127. "Increased R&D Productivity through High Throughput Methods," Virtual (Internet) Lecture, Federation of Societies of Coatings Technology, September 29, 2005.
128. "Performance of UV-Curable Nanocomposite Films from Organomodified Clays and Donor-Acceptor Matrix Resins," Gordon Research Conference on Coatings and Films, New London, New Hampshire, July 10-15, 2005.
129. "Use of High Throughput Methods in the Design of Coatings Having Minimally Adhesive Surfaces," Coatings Science International, Nordwijk, Netherlands, June 27-July 1, 2005.
130. "High Throughput System for the Development of Novel Marine Coatings," Research Methods for the 21<sup>st</sup> Century, New Orleans, May 18-20, 2005.
131. "Combinatorial and High Throughput Methods for the Development of Marine Coatings," General Electric, Niskayuna, New York, December 15, 2004.
132. "Combinatorial and High Throughput Approaches to Coatings and Polymers," ExxonMobil, Baytown, Texas, December 2, 2004.
133. "Advanced Polymer Chemistry for Coatings," REPORT 2004, sponsored by the Sociedad Argentina de Tecnólogos en Recubrimientos (SATER), Buenos Aires, Argentina, September 3, 2004.
134. "Combinatorial and High Throughput Approaches for Marine Coating Discovery," BASF, Ludwigshafen, Germany, May 24, 2004.
135. "Combinatorial and High Throughput Approaches to Polymer Materials and Formulations," Eastman Chemical Company, February 16, 2004.



136. "Property Enhancement through Incorporation of Organomodified Clays in UV-Cured Polymers," *Polymers for Advanced Technologies*, Fort Lauderdale, FL, September 2003.
137. "High Throughput Workflow in Coatings Development," Rohm and Haas, Spring House, Pa., July 21, 2003.
138. "Preparation and characterization of UV-curable clay nanocomposites," Northwestern Coatings Society Technical Symposium, Minneapolis, March 2003.
139. "Development of UV-curable polymer systems for flexible electronic devices," University of Southern Mississippi, February 2003.
140. "Evolution of Paint Technologies," PolyMillennial 2000, ACS Division of Polymer Chemistry, Waikoloa, Hawaii, December 2000.
141. "Applications of epoxybutene derivatives in polymers and coatings," J. E. McGrath Symposium, Virginia Tech, Blacksburg, Virginia, September 1999.
142. "Synthesis and applications of cyclic carbonate functional polymers in thermosetting coatings," XXVI International Conference on Coatings, Athens, Greece, July 1999.

#### **CONTRIBUTED PRESENTATIONS/POSTERS (Exclusive of Preprints)**

1. Kurt VanDonselaar, Mayam Safaripour, David Boucher, Dean Webster and Andrew B. Croll "Adhesion of Oil Filled PDMS Elastomers", Adhesion Society Annual Meeting, February 16-19, 2025. New Orleans, LA (2025). Poster presentation.
2. Dean C. Webster, Jingbo Wu, Alan Ekin, "Epoxy functional polyurethanes: A greener synthesis process," Coatings Science International, Noodrwijk, Netherlands, June 24-27, 2024. Oral Presentation.
3. Dean C. Webster, David Boucher, Maryam Safaripour, "Studies of miscibility of silicone oils in model silicone elastomers," 20<sup>th</sup> International Symposium on Silicon Chemistry, Hiroshima, Japan, May 13-17, 2024. Oral presentation given by Andrew Croll.
4. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Dean C. Webster, "Comparison of zwitterionic polymers in amphiphilic PDMS-based surface modifying additives to tune fouling release performance, American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Oral Presentation.
5. Tong Li, Dean C. Webster, "Fabrication of amphiphilic coatings for robust anti-icing surfaces," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Oral Presentation.
6. Iryna Bon, Dean C. Webster, "Biobased epoxy-anhydride coatings: a comprehensive study on curing mechanisms," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Poster Presentation.

7. Marta-levheniia Vonsul, Dean C. Webster, "Sustainability in coatings: assessing the feasibility of reprocessing cottonseed oil-based UV-curable resins," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Poster Presentation.
8. Ramsharan Pandey, David Boucher, Dean C. Webster, "Self-segregating urea-siloxane thermosets for ice and fouling release applications," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Poster Presentation.
9. Shikhin Nadkarni, Dean C. Webster, "Structure-property relationships of non-isocyanate, 2K polyurethane coatings produced from polycarbamate and dialdehyde crosslinking," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Poster Presentation.
10. Maryam Safaripour, Dean C. Webster, "Correlation between biofouling and ice adhesion in oil-infused silicone elastomers," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Poster Presentation.
11. Michael Odegaard, Solomiia Kapatsila, Dean C. Webster, "Synthesis and characterization of meth- and dimeth-acrylated epoxidized hempseed oils," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Poster Presentation.
12. Nastaran Shahzadeh, Dean C. Webster, "Amphiphilic coatings based on glycidyl carbamate resins for anti-icing applications," American Coatings Conference, Indianapolis, IN, April 30 – May 2, 2024. Poster Presentation.
13. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, John A. Finlay, Anthony S. Clare, Dean C. Webster, "Incorporation of Amphiphilic PDMS-based Hyperbranched Polyglycerol Polymers to Tune Fouling-Release Properties," American Chemical Society National Meeting, New Orleans, LA, March 17-21, 2024. Oral Presentation.
14. David Boucher, Dean C. Webster, "Understanding the miscibility of silicone fluids with different structural characteristics," American Chemical Society National Meeting, New Orleans, LA, March 17-21, 2024. Oral Presentation.
15. Marta-levheniia Vonsul, Austin Knight, Mohammad Sabzi, Long Jiang, Dean C. Webster, "Preparation of flexible epoxy foams derived from plant oil," American Chemical Society National Meeting, New Orleans, LA, March 17-21, 2024. Poster Presentation.
16. Michael Odegaard, Solomiia Kapatsila, Dean C. Webster, "Synthesis and characterization of meth- and dimeth-acrylated epoxidized hempseed oils," American Chemical Society National Meeting, New Orleans, LA, March 17-21, 2024. Poster Presentation.
17. Maryam Safaripour, David Boucher, Kurt VanDonselaar, Andrew Croll, Dean Webster, "Evaluating the Compatibility of Model Silicones with Silicone Oils, and Their Interaction with Ice Adhesion," 47<sup>th</sup> Annual Meeting of The Adhesion Society, Savannah, Ga., February, 11-14, 2024. Poster Presentation.
18. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Dean C. Webster, "Comparison of Zwitterionic Polymers in Amphiphilic PDMS-based Surface Modifying

Additives to Tune Fouling-Release Properties,” NDSU-KU Symposium, Kagoshima, Japan, November 6-8, 2023. Poster Presentation.

19. Michael Odegaard, Solomiia Kapatsila, Dean Webster “Synthesis and characterization of novel bio-based methacrylated and dimethacrylated epoxidized hempseed oils” Western Coatings Societies Symposium and Show, Las Vegas, NV, October 15-18, 2023. Poster Presentation.
20. Ivan Hevus, Sandip Tiwari, Luke R. Gibbon, Mukund P. Sibi, Dean C. Webster, “Vanillin-derived veratrole monomers for stereolithography,” Photopolymerization Fundamentals, Boulder, CO, September 19-22, 2023. Poster Presentation.
21. Ivan Hevus, Sandip Tiwari, Md Atikur Rahman, Melody C. Johnson, Luke R. Gibbon, Mukund P. Sibi, Dean C. Webster, “Vanillin-derived monomers for additive manufacturing,” ACS Fall 2023 National Meeting and Exposition, San Francisco, CA, August 13-17, 2023. Oral Presentation.
22. Marta-Ievheniia Vonsul, Mohammad Sabzi, Austin Knight, Long Jiang, Dean C. Webster, “Use of functionalized cottonseed oil for the preparation of bio-based synthetic leather”, American Chemical Society National Meeting, San-Francisco, CA, August 13-17, 2023. Poster Presentation.
23. Iryna Bon, Dean C. Webster, “Novel biobased anhydrides as a sustainable curing agents for epoxy resins: Kinetics and coatings properties study”, ACS Fall 2023 National Meeting and Exposition, San Francisco, CA, August 13-17, 2023. Poster.
24. Maryam Safaripour, David Boucher and Dean C. Webster, “Compatibility of phenyl silicone oils and model silicones for anti-biofouling surfaces”, ACS Fall 2023 National Meeting and Exposition, San Francisco, CA, August 13-17, 2023. Oral Presentation.
25. Shikhin Nadkarni, Prakash Kannaboina, Sagar Thorat, Mukund Sibi, Dean C. Webster, “Investigation of the carbamate-aldehyde reaction for non-isocyanate polyurethanes for coating applications”, American Chemical Society Meeting Fall 2023, San Francisco, CA, August 13-17, 2023, Poster Presentation.
26. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Dean C. Webster, “Comparison of Zwitterionic Polymers in Amphiphilic PDMS-based Surface Modifying Additives to Tune Fouling-Release Properties,” American Chemical Society National Meeting, San Francisco, CA, August 13-17, 2023. Oral Presentation.
27. Michael Odegaard, Dean Webster “Waterborne non-isocyanate polyurethane coating using carbamate-aldehyde chemistry” American Chemical Society National Meeting, San Francisco, CA August 13-17, 2023. Oral Presentation.
28. David G. T. Boucher, Jiayue Huang, Anish Tuteja, Dean C. Webster, “Self-segregating siloxane-urethane thermoset as durable ice-release coating.” CoatingTech conference 2023, Cleveland, OH, June 26-28, 2023. Oral Presentation.
29. Ramsharan Pandey, Jiayue Huang, Anish Tuteja, Dean C. Webster, “Effect of silicone oil additives on urea-siloxane coating for anti-icing applications”, Coatings Tech Conference 2023, Cleveland, OH, June 26-28, 2023. Poster Presentation.

30. Marta-levheniia Vonsul, Dean C. Webster, "Characterization of cottonseed oil-based coatings cured via UV-curing technology", Coatings Tech Conference (American Coatings Association), Cleveland, OH, June 26-28, 2023. Poster Presentation
31. Iryna Bon, Dean C. Webster, "Curing Behavior and Properties of Biobased Epoxy-Anhydride Coatings", 2023 CoatingsTech Conference, Cleveland, OH, June 26-28, 2023. Poster.
32. Michael Odegaard, Md. Sanaul Huda, Ewumbua Monono, Dean Webster "Synthesis and Characterization of Novel Bio-based Epoxidized Sucrose Cornate" CoatingsTech Conference 2023, Cleveland, OH, June 26-28, 2023. Poster Presentation.
33. Shokoofeh Ghasemi, Morgen Hagerott, Jiayue Huang, Anish Tuteja, Dean C. Webster, "Development of an Epoxy-Siloxane Coating for Ice Releasing Properties Enhancement", Coating Tech Conference, Cleveland, OH, June 26-28, 2023, Poster Presentation.
34. Hannah A. Booher, Dean C. Webster, "An Exploratory Study of a Bio-based Acetoacetylated Methoxylated Sucrose Soyate Polyol Crosslinked with Multifunctional Amines," American Chemical Society National Meeting, San Fransico, CA, August 13-17, 2023. Poster Presentation.
35. Shikhin Nadkarni, Prakash Kannaboina, Sagar Thorat, Mukund Sibi, Dean C. Webster, "Model studies to investigate carbamate-aldehyde non-isocyanate polyurethane system for coating applications", American Coatings Association CoatingsTech Conference 2023, Cleveland, OH, June 26-28, 2023, Poster Presentation.
36. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Dean C. Webster, "Critical Amphiphilic Concentration: Varying the Amphiphilicity of the Prepolymer and how it Affects Marine Fouling-Release Performance with Detailed Surface Characterization," American Coatings Technical Conference, Cleveland, OH, June 26-28, 2023. Poster Presentation.
37. Marta-levheniia Vonsul, Mohammad Sabzi, Austin Knight, Long Jiang, Dean C. Webster, "Investigation of next generation biobased leather using cotton plant derived materials", American Oil Chemists' Society Meeting, Denver, CO, April 30-May 3, 2023. Oral Presentation.
38. Marta-levheniia Vonsul, Dean C. Webster, "Implementation of cottonseed oil in synthesis of epoxy-acrylate resin and its performance in coating application", Northwest Society for Coatings Technology Meeting, Minneapolis, MN, April 11, 2023. Oral Presentation.
39. Ivan Hevus, Sandip Tiwari, Prakash Kannaboina, Jingbo Wu, Mukund P. Sibi, Dean C. Webster, "Bio-based monomers as sustainable reactive diluents for stereolithography," ACS Spring 2023 National Meeting and Exposition, Indianapolis, IN, March 26-30, 2023. Oral Presentation.
40. David G. T. Boucher, Jiayue Huang, Anish Tuteja, Dean C. Webster, "PDMS containing self-segregating PU coatings for improved ice release properties." ACS Spring 2023, Indianapolis, IN, March 26-30, 2023. Oral Presentation.

41. Achiya Khanam, Geraldo Casanola-Martin, Maryam Safaripour, Dean C. Webster and Bakhtiyor Rasulev, "Development of Linear and Non-Linear QSAR Models to Predict Fouling-Release Performance of Silicone Oil-Modified Siloxane Elastomer-based Coatings", ACS Spring 2023 National Meeting and Exposition, Indianapolis, IN, March 26-30, 2023. Poster Presentation.
42. Ramsharan Pandey, Jiayue Huang, Anish Tuteja, Dean C. Webster, "Moisture curable urea-siloxane coating for anti-icing applications", American Chemical Society National Meeting Spring 2023, Indianapolis, IN, March 26-30, 2023. Poster Presentation.
43. Shokoofeh Ghasemi, Morgen Hagerott, Jiayue Huang, Anish Tuteja, Dean C. Webster, "Development of an Epoxy-Siloxane Coating for Ice Releasing Properties Enhancement", American Chemical Society Meeting and Expo, Indianapolis, IN, March 26-30, 2023, Poster Presentation.
44. Kurt VanDonselaar, Daniel Angel Bellido-Aguilar, Maryam Safaripour, Dean C. Webster and Andrew B. Croll, "Adhesion in Several Model Anti-Fouling and Anti-Icing Coatings", Adhesion Society Annual Meeting. Orlando, FL, February 19-22, 2023. Poster Presentation.
45. Ivan Hevus, Prakash Kannaboina, Jingbo Wu, Mukund P. Sibi, Dean C. Webster, "Novel Bio-Based Reactive Diluents for Stereolithography," 7th NDSU-KU Annual Symposium, Fargo, ND, October 6-7, 2022. Poster Presentation.
46. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Dean C. Webster, "Critical Amphiphilic Concentration: Varying the Amphiphilicity of the Prepolymer and how it Affects Marine Fouling-Release Performance," NDSU-KU Symposium, Fargo, ND, October 6-7, 2022. Poster Presentation.
47. David G. T. Boucher, Jiayue Huang, Anish Tuteja, Dean C. Webster, "PDMS containing self-segregating PU coatings for improved ice release properties." NDSU-KU 7th Annual Symposium, Fargo, ND, October 6-7, 2022. Poster Presentation.
48. Ramsharan Pandey, Dean C. Webster, Ghasideh Pourhashem, "Sustainability assessment of lignin valorization into rigid foams", NDSU-KU 7th Annual Symposium, Fargo, ND, October 6-7, 2022. Poster Presentation.
49. Maryam Safaripour, John. Finlay and Dean C. Webster, "Model silicone elastomers containing silicone oils for reduced fouling and ice adhesion", NDSU-KU Joint Symposium on Biotechnology, Nanomaterials and Polymers. Fargo, ND, October 6-7, 2022. Poster Presentation.
50. Michael Odegaard, Md. Sanaul Huda, Ewumbua Monono, Dean Webster "Synthesis and Characterization of Novel Bio-based Epoxidized Sucrose Cornate" NDSU-KU 7th Annual Symposium, Fargo, ND, October 6-7, 2022. Poster Presentation.
51. Marta-Ievheniia Vonsul, Dean C. Webster, "Preparation of reprocessable covalent adaptable network from cottonseed oil and evaluation of its mechanical properties", NDSU-KU 7th Annual Symposium, Fargo, ND, October 6-7, 2022. Poster Presentation.

52. Shokoofeh Ghasemi, Mukund P Sibi, Dean C. Webster, Ghasideh Pourhashem, "Biodegradability of a Bio-based Epoxy Resin and Coating in a Wastewater Environment", NDSU-KU 7th Annual Symposium, Fargo, ND, October 6-7, 2022. Poster Presentation.
53. David G. T. Boucher, Dean C. Webster, "Understanding and modeling the parameters affecting ice and barnacle adhesion on coatings for material design guidance." ACS Fall 2022, Chicago, IL, August 21-25, 2022. Oral Presentation.
54. Maryam Safaripour and Dean C. Webster, "Incorporation of free silicone oils into PDMS-based coating for anti-biofouling and anti-icing surfaces", ACS Fall 2022 National Meeting and Exposition. Chicago, IL, August 21-25, 2022. Poster Presentation.
55. Hannah A. Booher, Shokoofeh Ghasemi, Gassideh Pourashem, Dean C. Webster, "Synthesis of Acetoacetylated Methoxylated Sucrose Soyate Polyol and Crosslinking with Multifunctional Acrylates at Ambient Conditions," American Chemical Society National Meeting, Chicago, IL, August 20-25, 2022. Poster Presentation.
56. Joseph Dahlgren, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Dean C. Webster, "Critical Amphiphilic Concentration: Varying the Amphiphilicity of the Prepolymer and how it Affects Marine Fouling-Release Performance," American Chemical Society National Meeting, Chicago, IL, August 21-25, 2022. Poster Presentation.
57. Michael Odegaard, Md. Sanaul Huda, Ewumbua Monono, Dean Webster "Synthesis and Characterization of Novel Bio-based Epoxidized Sucrose Cornate" American Chemical Society National Meeting, Chicago, IL, August 21-25, 2022. Poster Presentation.
58. Marta-Ievheniia Vonsul, Dean C. Webster, "Preparation of reprocessable covalent adaptable network from cottonseed oil and evaluation of its mechanical properties", American Chemical Society National Meeting, Chicago, IL, August 21-25, 2022. Poster Presentation.
59. Dean C. Webster, Raul Setien, Samantha Silbert, Arvin Yu, "Coatings binder systems from high functionality bio-based seed-oil derived resins," European Technical Coatings Conference, Krakow, Poland, July 12-14, 2022. Oral Presentation.
60. David G. T. Boucher, Dean C. Webster, "Understanding and modeling the parameters affecting ice and barnacle adhesion on coatings for material design guidance." EPF European Polymer Congress, Prague, Czech Republic, June 22-July 1, 2022. Oral Presentation.
61. Olena Shafranska, Alexander Jones, Janice Tardiff, Dean C. Webster, "Soybean oil as pre-treatment of micronized recycled rubber for non-tire SBR formulations," American Chemical Society, Rubber Division Spring Technical Meeting, Cleveland, OH, April 26-28, 2022. Oral Presentation.
62. Joseph Dahlgren, Lauren Foy, Kelli Hunsucker, Harrison Gardner, Geoff Swain, Shane J. Stafslie, Lyndsi Vanderwal, James Bahr, Dean C. Webster, "Grooming of Fouling-Release Coatings and Determining the Impact on Surface Properties," American Coatings Conference, Indianapolis, IN, April 5-7, 2022. Poster Presentation.

63. Maryam Safaripour, Daniel Angel Bellido-Aguilar, Andrew B. Croll, and Dean C. Webster, "PDMS-based coatings for anti-biofouling and anti-icing surfaces", American Coatings Conference, Indianapolis, IN, April 5-7, 2022. Poster Presentation.
64. Marta-levheniia Vonsul, Dean C. Webster, "Properties of cottonseed oil based coatings cured via UV-radiation", American Coatings Conference, Indianapolis, IN, April 5-7, 2022. Poster Presentation.
65. Shokoofeh Ghasemi, Mukund P Sibi, Dean C. Webster, Ghasideh Pourhashem, "Biodegradability of a Bio-based Epoxy Resin and Coating in a Wastewater Environment", American Coatings Show and Conference, Indianapolis, IN, April 5-7, 2022. Poster Presentation.
66. Marta-levheniia Vonsul, Dean C. Webster, "Application of epoxy-acrylate cottonseed oil based resins in UV-curing technology", American Chemical Society National Meeting, San Diego, CA, March 20-24, 2022. Poster Presentation.
67. Daniel Angel Bellido-Aguilar, Maryam Safaripour, Dean C. Webster, and Andrew B. Croll, "Fundamental adhesion studies on PDMS-based coatings for anti-icing applications", Adhesion Society Annual Meeting. San Diego, CA, February 20-23, 2022. Oral Presentation.
68. Marta-levheniia Vonsul, Dean C. Webster, "Cottonseed oil based UV-curable resins", American Chemical Society Great Lakes Regional Meeting, June 6-9, 2021. Oral Presentation.
69. Shokoofeh Ghasemi, Mukund P Sibi, Dean C. Webster, Ghasideh Pourhashem, "Sustainability and Cost Tradeoffs of Epoxidized Sucrose Soyate: A Bio-Based Thermoset Resin", American Institute of Chemical Engineers annual meeting, November 16-20, 2020, Virtual. Oral Presentation.
70. Olena Shafranska, Joseph Dahlgren, Alexander Jones, Janice Tardiff, Dean C. Webster, "Effect of soybean oils with various unsaturation levels on carbon black-filled EPDM rubber," International Elastomer Conference, Virtual, October 19-23, 2020. Oral Presentation
71. Olena Shafranska, Ryan Burgett, Dean C. Webster, "Soybean oil as a plasticizer for micronized recycled crumb rubber," 196<sup>th</sup> Technical Meeting of the ACS Rubber Division, Cleveland, Ohio, October 8-10, 2019. Oral Presentation.
72. Jackson Benda, Dean C. Webster, "Effect of surface modifying amphiphilic additives (SMAAs) on siloxane-polyurethane (SiPU) Fouling-release coatings," NDSU-KU Joint Symposium on Biotechnology, Nanomaterials, and Polymers, October 3-5, 2019. Poster presentation.
73. Raul A. Setien, Dean C. Webster, "Epoxidation of soybean oil utilizing dioxirane intermediates generated from oxone," NDSU-KU Joint Symposium on Biotechnology, Nanomaterials, and Polymers, October 3-5, 2019. Poster presentation.
74. AliReza Rahimi, Dean C. Webster, "Design of surface modifying amphiphilic polymeric additives to tune properties of a hydrophobic marine paint against biofouling," NDSU-KU

Joint Symposium on Biotechnology, Nanomaterials, and Polymers, October 3-5, 2019.  
Poster presentation.

75. Jackson Benda, Dean C. Webster, "Novel surface modifying amphiphilic additives (SMAAs) with varying architecture: Effect on fouling-release properties of siloxane-polyurethane (SiPU) fouling-release coatings," American Chemical Society National Meeting, San Diego, Ca., August 25-29, 2019. Oral Presentation.
76. AliReza Rahimi, Dean C. Webster, "Design of surface-modifying polymeric additives to improve performance of fouling-release marine coatings to combat biofouling," American Chemical Society National Meeting, San Diego, Ca., August 25-29, 2019. Oral Presentation.
77. Raul Setien, Dean C. Webster, "Epoxidation of Soybean Oil Utilizing Dioxirane Intermediates Generated from Oxone," American Chemical Society National Meeting, San Diego, Ca., August 25-29, 2019. Poster presentation.
78. Dean C. Webster, "Glycidyl carbamate functional polymers: a non-isocyanate polyurethane," American Chemical Society National Meeting, Orlando, FL, March 31-April 4, 2019. Oral Presentation.
79. Samantha D. Silbert, Eric M. Serum, Mukund P. Sibi, Dean C. Webster, "Ambiently cured, bio-based, non-isocyanate polyurethane produced from polycarbamate-dialdehyde crosslinking," American Chemical Society National Meeting, Orlando, FL, March 31-April 4, 2019. Oral Presentation.
80. Samantha D. Silbert, Eric M. Serum, Mukund P. Sibi, Dean C. Webster, "Ambiently cured, bio-based, non-isocyanate polyurethane produced from polycarbamate-dialdehyde crosslinking," Red River Valley ACS Young Investigator Award Competition, Mayville State University, Fargo, ND, February 2, 2019. Oral Presentation Received Excellent Presentation Award.
81. Jackson Benda, Dean C. Webster, "The effect of surface modifying additives (SMAAs) on siloxane-polyurethane fouling-release coatings," 4<sup>th</sup> KU-NDSU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Kagoshima, Japan, October 31 – November 1, 2018. Poster.
82. Eric Krall, Mitchell Maw, Dean C. Webster, "Novel synthesis of acetoacetate resin derived from kraft lignin," 4<sup>th</sup> KU-NDSU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Kagoshima, Japan, October 31 – November 1, 2018. Poster.
83. Alison Rohly, Mary Striegel, Jason Church, Dean Webster, "Alkoxysilane sol-gel consolidants for calcareous stone," 4<sup>th</sup> KU-NDSU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Kagoshima, Japan, October 31 – November 1, 2018. Poster.
84. Olena Shafranska, Ryan Burgett, Lyndsi Vanderwal, Dean C. Webster, "High oleic soybean oil as a plasticizer for recycled crumb rubber," Third International Symposium on Materials from Renewables, Fargo, ND, July 17-18, 2018. Poster.
85. Eric Krall, Mitchell Maw, Dean C. Webster, "Novel synthesis of Acetoacetate Resins Derived from Kraft Lignin." Third International Symposium on Materials from Renewables, Fargo, ND. July 17-18, 2018. Poster.



86. Raul Setien, Dean C. Webster, "Synthesis of Acrylated and Methacrylated Resins from Epoxidized Sucrose Soyate" Third International Symposium on Materials from Renewables, Fargo, ND, July 17-18, 2018. Poster.
87. Jackson Benda, Dean C. Webster, "The effect of surface modifying additives on the fouling-release properties of siloxane-polyurethane coatings, 19<sup>th</sup> International Congress on Marine Corrosion and Fouling, Melbourne, Florida, June 24-29, 2018. Poster.
88. Eric Krall, Dean C. Webster, "Coatings composites and foams: A novel approach to creating functionalized kraft lignin resins," 22<sup>nd</sup> Annual Green Chemistry and Engineering Conference, Portland, Oregon, June 18-20, 2018. Poster.
89. Eric M. Serum, Eric Krall, Dean C. Webster, Mukund P. Sibi, "Structural elucidation of valorized lignin: Acetoacetylation of simple model compounds and lignin," 22<sup>nd</sup> Annual Green Chemistry and Engineering Conference, Portland, Oregon, June 18-20, 2018. Poster.
90. Alison Rohly, Dean C. Webster, "Alkoxysilane sol-gel consolidants for calcareous stones," American Institute for Conservation of Historic and Artistic Works (AIC) 46<sup>th</sup> Annual Meeting, Houston, Texas, May 29-June 3, 2018. Oral.
91. Ruvimbo Chitemere, Dean Webster, Mohiuddin Quadir, "Soy-based nanoparticles for customized molecule transport," North Dakota EPSCoR State Conference, Grand Forks, ND, April 17, 2018. Poster.
92. Eric Krall, Mitchell Maw, Dean Webster, "Novel synthesis of acetoacetate resin derived from kraft lignin," North Dakota EPSCoR State Conference, Grand Forks, ND, April 17, 2018. Poster.
93. Raul Setien, Zhihan Wang, Zijun Wang, Qianli Chu, Dean Webster, "Comparison of polymeric properties of phthalic acid and CBDA-2 as a monomer for utilization in polyester synthesis and as curing agents," North Dakota EPSCoR State Conference, Grand Forks, ND, April 17, 2018. Poster.
94. Jackson Benda, Dean C. Webster, "The effect of surface modifying additives in fouling-release siloxane-polyurethane coatings," American Coatings Conference, Indianapolis, In., April 9-11, 2018. Poster.
95. Ivan Hevus, Dean C. Webster, "Biobased carboxylic acids as components of sustainable coating systems," National Meeting of the American Chemical Society, New Orleans, La., March 17-22, 2018. Oral.
96. Dean C. Webster, Arvin Yu, Songqi Ma, Adlina Paramarta, "High performance bio-based thermosets from highly functional vegetable oil-based resins," ECO-BIO 2018, Dublin, Ireland, March 4-7, 2018. Oral.
97. Eric Krall, Dean C. Webster, "Development and polymerization of methacrylate functionalized kraft lignin resin," The Fiber Society 2017 Fall Meeting and Technical Conference and International Symposium on Materials from Renewables, Athens, GA, November 8-10, 2017. Poster.

98. Arvin Yu, Raul Setien, James Docken, Jr., Dean C. Webster, "Catalyzed non-isocyanate polyurethane (NIPU) coatings from bio-based cyclic carbonates," The Fiber Society 2017 Fall Meeting and Technical Conference and International Symposium on Materials from Renewables, Athens, GA, November 8-10, 2017. Poster.
99. Eric Krall, Kelly Sutko, Dean C. Webster, "Development of methacrylate functionalized resin derived from kraft lignin," National Meeting of the American Chemical Society, Washington, DC, August 20-24, 2017. Poster.
100. Eric Krall, Dean C. Webster, "Novel development of bio-based resin derived from kraft lignin," Great Lakes Regional Meeting 2017, Fargo, ND, June 27-30, 2017. Poster.
101. Samantha Silbert, Dean C. Webster, "Investigating the improvement of metal adhesion of cationic, UV-curable, bio-based epoxy coatings," Great Lakes Regional Meeting 2017, Fargo, ND, June 27-30, 2017. Poster.
102. Anthony Clay, Dean Webster, Mukund Sibi, Jayaraman Sivaguru, "Biomass derived photoinitiators," Great Lakes Regional Meeting 2017, Fargo, ND, June 27-30, 2017.
103. Ruvimbo, Chitemere, Mohiuddin Quadir, Dean Webster, "Soy-based soft matrices for customizable cargo delivery," Great Lakes Regional Meeting 2017, Fargo, ND, June 27-30, 2017.
104. Olena Shafranska, Bret Chisholm, Dean Webster, "Polystyrene modified soybean oil for SBR-based rubber processing," Great Lakes Regional Meeting 2017, Fargo, ND, June 27-30, 2017.
105. Arvin Yu, Dean Webster, "Organocatalyzed non-isocyanate polyurethane (NIPU) coatings from bio-based cyclic carbonates," Great Lakes Regional Meeting 2017, Fargo, ND, June 27-30, 2017.
106. Arvin Yu, Raul Setien, James Docken, Jr., Dean C. Webster, "Catalyzed non-isocyanate polyurethane (NIPU) coatings from bio-based cyclic carbonates," 21<sup>st</sup> Annual Green Chemistry & Engineering Conference, Reston, VA, June 13-15, 2017.
107. Dean C. Webster, Teluka Galhenage, Augusto M.S. Moreira, Ryan Burgett, Shane J. Stafslie, Lyndsi Vanderwal, John A. Finlay, Sofia Franco, Tony Clare, "Non-toxic amphiphilic fouling-release coatings via self-stratification," 21<sup>st</sup> Annual Green Chemistry & Engineering Conference, Reston, VA, June 13-15, 2017.
108. Dean C. Webster, Adlina Paramarta, Songqi Ma, "High performance bio-based thermosets from highly functional resin systems," 21<sup>st</sup> Annual Green Chemistry & Engineering Conference, Reston, VA, June 13-15, 2017.
109. Arvin Yu and Dean C. Webster, "Optimization studies on viscosity and thermomechanical properties of highly methacrylated bio-based resins," 9<sup>th</sup> Workshop on Fats and Oils as Renewable Feedstock for the Chemical Industry, Karlsruhe, Germany, March 19-21, 2017.
110. Arvin Yu, Raul Setien, James Docken, Dean C. Webster, "Catalyzed non-isocyanate polyurethane (NIPU) coatings from bio-based cyclic carbonates," 9<sup>th</sup> Workshop on Fats and

Oils as Renewable Feedstock for the Chemical Industry, Karlsruhe, Germany, March 19-21, 2017.

111. Samantha Silbert, Dean C. Webster, "Investigating the improvement of metal adhesion of cationic, UV-curable, bio-based epoxy coatings," The Society of Protective Coatings Conference Student Poster Competition, Tampa, FL, January 30-February 2, 2017. Poster. Awarded 1st Place.
112. Kelly Sutko, Eric Krall, Dean C. Webster, "Bio-based thermosets from novel methacrylated lignin resin," 51<sup>st</sup> Midwest Regional Meeting of the American Chemical Society, Manhattan, Kansas, October 26-28, 2016.
113. Ivan Hevus, Dean C. Webster, "Bio-based cationic UV-curable resins for waterborne printing inks," 1<sup>st</sup> International Symposium on Materials from Renewables, Fargo, N.D. July 19-20, 2016. Poster.
114. Eric Krall, Dean C. Webster, "Development of acetoacetate functionalized resins derived from Kraft lignin," 1<sup>st</sup> International Symposium on Materials from Renewables, Fargo, N.D. July 19-20, 2016. Poster.
115. Adlina Paramarta, Dean C. Webster, "High performance ambient cure coatings derived from soybean-oil based acrylic resin," 1<sup>st</sup> International Symposium on Materials from Renewables, Fargo, N.D. July 19-20, 2016. Poster.
116. Alison Rohly, Dean C. Webster, "Vanillin: a biobased crosslinker for melamine-formaldehyde coatings," 1<sup>st</sup> International Symposium on Materials from Renewables, Fargo, N.D. July 19-20, 2016. Poster.
117. Samantha Silbert, Dean C. Webster, "UV-curable bio-based epoxy coatings," 1<sup>st</sup> International Symposium on Materials from Renewables, Fargo, N.D. July 19-20, 2016. Poster.
118. Arvin Yu, Dean C. Webster, "Novel bio-based highly functional dual methacrylated epoxidized sucrose soyate (DMESS)," 1<sup>st</sup> International Symposium on Materials from Renewables, Fargo, N.D. July 19-20, 2016. Poster.
119. Madhura Pade, Jackson Benda, Dean Webster, Shane Stafslie, Lyndsi Vanderwal, "Non-toxic isocyanate-free fouling-release coatings," 12<sup>th</sup> National Graduate Research Polymer Conference, Akron, Ohio, June 19-22, 2016. Oral.
120. Arvin Z. Yu, Jonas M. Sahouani, Dean C. Webster, "Structure-property relationships of dual methacrylated epoxidized sucrose soyate (DMESS)," 12<sup>th</sup> National Graduate Research Polymer Conference, Akron, Ohio, June 19-22, 2016. Poster.
121. Alison Rohly, Dean C. Webster, "Vanillin: A biobased crosslinker for melamine-formaldehyde coatings," 12<sup>th</sup> National Graduate Research Polymer Conference, Akron, Ohio, June 19-22, 2016. Poster.
122. Eric M. Krall, Dean C. Webster, "Model compound study to characterize the development of acetoacetate functionalized resin derived from Kraft lignin," 12<sup>th</sup> National Graduate Research Polymer Conference, Akron, Ohio, June 19-22, 2016. Poster

123. Jonas M. Sahouani, Arvin Z. Yu, Dean C. Webster, "Highly functional methacrylated bio-based resin system for UV-curable coatings," 12<sup>th</sup> National Graduate Research Polymer Conference, Akron, Ohio, June 19-22, 2016. Poster.
124. Joshua R. Bernier, Alison Rohly, Dean C. Webster, "Study of vanillin-amine systems for potential uses in coatings," North Dakota EPSCoR State Conference, Grand Forks, ND, April 19, 2016. Poster
125. Arvin Yu, Jonas Sahouani, Dean C. Webster, "Structure-property relationships of dual methacrylated epoxidized sucrose soyate (DMESS)," North Dakota EPSCoR State Conference, Grand Forks, ND, April 19, 2016. Poster
126. Jonas Sahouani, Arvin Yu, Dean C. Webster, "Highly functional methacrylated bio-based resin system for UV curable coatings," North Dakota EPSCoR State Conference, Grand Forks, ND, April 19, 2016. Poster
127. Alison Rohly, Dean C. Webster, "Vanillin: A biobased crosslinker for melamine formaldehyde coatings," North Dakota EPSCoR State Conference, Grand Forks, ND, April 19, 2016. Poster
128. Eric Krall, Taysir Bader, Eric Serum, Dean Webster, Mukund Sibi, "Model Compound Study to Characterize the Development of Acetoacetate Functionalized Resin Derived from Kraft Lignin," North Dakota EPSCoR State Conference, Grand Forks, ND, April 19, 2016. Poster
129. Adlina Paramarta, Dean C. Webster, "Ambient-cured Coatings derived from Acrylated Epoxidized Soybean Oil," North Dakota EPSCoR State Conference, Grand Forks, ND, April 19, 2016. Poster
130. Ivan Hevus, Dean C. Webster, "Sustainable UV-curable cationic resins from sucrose soyate," North Dakota EPSCoR State Conference, Grand Forks, ND, April 19, 2016. Poster.
131. Alison Rohly, Dean C. Webster, "Vanillin: A biobased crosslinker for melamine-formaldehyde coatings," American Coatings Conference, Indianapolis, Indiana, April 11-13, 2016. Poster.
132. Madhura Pade, Jackson Benda, Dean C. Webster, "Novel non-isocyanate siloxane-polyurethane coatings," American Coatings Conference, Indianapolis, Indiana, April 11-13, 2016. Oral.
133. Teluka Galhenage, Dean C. Webster, Augusto Moreira, Ryan J. Burgett, Shane J. Stafslie, Lyndsi Vanderwal, John A. Finlay, Sofia C. Franco, Anthony S. Clare, "Poly(ethylene glycol) modified amphiphilic siloxane polyurethane coatings and their performance," American Coatings Conference, Indianapolis, Indiana, April 11-13, 2016. Oral. Winner of the 1<sup>st</sup> Place Roon Award.
134. Dean C. Webster, Songqi Ma, Curtiss Kovash, "Effects of solvents on the curing and properties of fully biobased thermosets for coatings," American Coatings Conference, Indianapolis, Indiana, April 11-13, 2016. Oral.

135. Songqi Ma, Dean C. Webster, "Sustainable thermosets from epoxidized sucrose soyate and carboxylic acids with the assistance of solvents," ACS National Meeting, San Diego, Ca., March 13-17, 2016. Oral
136. Eric Krall, Dean Webster, Taysir Bader, "Model compound study to characterize the development of acetoacetate functionalized resin derived from kraft lignin," ACS National Meeting, San Diego, Ca., March 13-17, 2016. Poster
137. Madhura Pade, Jackson Benda, Dean Webster, Shane Stafslie, Lyndsi VanderWal, "Non-isocyanate approach for the synthesis of polyurethane fouling-release coatings," ACS National Meeting, San Diego, Ca., March 13-17, 2016. Poster
138. Arvin Yu, Dean Webster, "Effect of degree of functionality on properties of methacrylated bio-based resins and thermosets," ACS National Meeting, San Diego, Ca., March 13-17, 2016. Oral
139. Ivan Hevus, Dean Webster, "Highly functional cationic biobased resins for sustainable UV-curable coatings," ACS National Meeting, San Diego, Ca., March 13-17, 2016. Oral
140. Alison Rohly, Dean Webster, "Vanillin: A biobased crosslinker for melamine-formaldehyde coatings," ACS National Meeting, San Diego, Ca., March 13-17, 2016. Poster
141. Joshua Bernier, Alison Rohly, Dean Webster, "Study of vanillin-amine systems for potential uses in coatings," ACS National Meeting, San Diego, Ca., March 13-17, 2016. Poster. Winner of second place award in Undergraduate Research in Polymer Science Symposium.
142. Teluka Galhenage, Dean Webster, Augusto Moreira, Shane Stafslie, Lyndsi VanderWal, John Finlay, Sofia Franco, Tony Clare, "Poly(ethylene glycol) modified amphiphilic siloxane polyurethane coatings and their performance as effective fouling release surfaces," ACS National Meeting, San Diego, Ca., March 13-17, 2016.
143. Madhura Pade, Dean C. Webster, "Water dispersible glycidyl carbamate coatings for fouling-release applications," Pacific Polymer Conference 14, Kawai, Hawaii, December 9-13, 2015.
144. Songqi Ma, Dean C. Webster, "Naturally-occurring acids as crosslinkers to yield VOC-free, high-performance fully bio-based, degradable thermosets," NDSU-KU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Fargo, ND, October 15-16, 2015.
145. Arvin Z. Yu, Dean C. Webster, "Synthesis and characterization of biobased thermosets from dual methacrylated epoxidized sucrose soyate (DMESS)," NDSU-KU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Fargo, ND, October 15-16, 2015.
146. Adlina Paramarta, Dean C. Webster, "Finding the optimum accelerator for anhydride-cured epoxidized sucrose soyate thermoset," NDSU-KU Joint Symposium on Biotechnology, Nanomaterials and Polymers, Fargo, ND, October 15-16, 2015.

147. Teluka Galhenage, Dean C. Webster, Shane Stafslie, Justin Daniels, John Finlay, "Fouling-release performance of silicone oil modified siloxane-polyurethane coatings," ACS National Meeting, Boston, Ma., August 16-20, 2015.
148. Teluka Galhenage, Dean Webster, Dylan Hoffman, Samantha Silbert, Shane Stafslie, Lyndsi Vanderwal, John Finlay, Sofia Franco, "Fouling-release performance of siloxane-polyurethane marine coatings: Comparison of laboratory biological assays and field immersion studies in the marine environment," ACS National Meeting, Boston, Ma., August 16-20, 2015.
149. Arvin Yu, Dean C. Webster, "Synthesis and characterization of biobased thermosets from dual methacrylated epoxidized sucrose soyate," ACS Green Chemistry and Engineering Conference, Bethesda, Md., July 14-16, 2015.
150. James A. Docken, Jr., Dean C. Webster, "Novel biobased resins for use in non-isocyanate polyurethane coatings," ACS Green Chemistry and Engineering Conference, Bethesda, Md., July 14-16, 2015.
151. Allison Rohly, Dean C. Webster, "Vanillin: A biobased crosslinker for thermoset coatings," ACS Green Chemistry and Engineering Conference, Bethesda, Md., July 14-16, 2015.
152. Eric Krall, Dean C. Webster, "Development of Acetoacetate functionalized resin derived from Kraft lignin," ACS Green Chemistry and Engineering Conference, Bethesda, Md., July 14-16, 2015.
153. Teluka Galhenage, Dean C. Webster, Dylan Hoffman, Kunyu Zheng, Shane J. Stafslie, Justin Daniels, John A. Finlay, Maureen E. Callow, James, E. Callow, "Amphiphilic Acid Functional Siloxane Polyurethane Coatings," International Congress on Marine Corrosion and Fouling, Singapore, July 6 – 10, 2014.
154. Adlina Paramarta, Dean C. Webster, "Curing kinetics of bio-based epoxy-anhydride thermosets," American Coatings Conference, Atlanta, Georgia, April 8-10, 2014.
155. Alison Rohly, Dean C. Webster, "Is the silanol-isocyanate reaction suitable for forming stable siloxane-polyurethane block copolymers?" ACS National Meeting, Dallas, Texas, March 16-20, 2014.
156. Madhura Pade, Dean C. Webster, James Bahr, Shane Stafslie, Justin Daniels, "PU-PDMS fouling release coatings: Effect of surface damage," ACS National Meeting, Dallas, Texas, March 16-20, 2014.
157. Adlina Paramarta, Dean C. Webster, Chris Taylor, Chad Ulven, "Biobased epoxy-anhydride thermosets for structural composites: The effect of composition variables," 247<sup>th</sup> National Meeting of the American Chemical Society, Dallas, Texas, March 16-20, 2014.
158. Dean C. Webster, Thomas J. Nelson, Adlina Paramarta, Jimmy Docken, "Understanding the performance of novel biobased polymer systems used in coatings and composites," 246<sup>th</sup> National Meeting of the American Chemical Society, Indianapolis, Indiana, September 8-12, 2013.

159. Curtiss Kovash, Erin Pavlacky, Dean C. Webster, "Vinyl ether blocked carboxylic acid compounds for use in biobased epoxy-acid thermosets," 245<sup>th</sup> National Meeting of the American Chemical Society, New Orleans, La., April 7-11, 2013.
160. Adlina Paramarta, Dean Webster, Chris Taylor, Chad Ulven, "Biobased epoxy-anhydride thermosets for biocomposite matrix resin systems," 245<sup>th</sup> National Meeting of the American Chemical Society, New Orleans, La., April 7-11, 2013.
161. Curtiss Kovash, Erin Pavlacky, Dean C. Webster, "Blocked biobased acids as crosslinkers for biobased epoxy resins," CoatingsTech, Rosemont, Ill., March 12-13, 2013.
162. Dean C. Webster, "Novel high performance vegetable-oil based thermosets," International Conference on Biobased Polymers and Composites, Siofok, Hungary, May 27-31, 2012.
163. Thomas J. Nelson, Dean C. Webster, "Catalyzed Crosslinking of highly functional biobased resins," American Coatings Conference, Indianapolis, In, May 7-9, 2012.
164. Thomas J. Nelson, Dean C. Webster, "Highly functional biobased polyols and their use in melamine-formaldehyde systems," Poster presented at American Coatings Conference, Indianapolis, In, May 7-9, 2012.
165. Adlina Paramarta, Dean C. Webster, "Soybean-based epoxy-anhydride thermoset coatings," Poster presented at American Coatings Conference, Indianapolis, In, May 7-9, 2012.
166. Thomas J. Nelson, Dean C. Webster, "Impact of functionality on properties of vegetable oil based thermosetting coatings," 5<sup>th</sup> Workshop on Fats and Oils as Renewable Feedstocks for the Chemicals Industry, Karlsruhe, Germany, March 18-20, 2012.
167. Rajan B. Bodkhe, Dean C. Webster, "Novel amphiphilic siloxane-polyurethane fouling release coatings using ring-opening equilibration polymerization and click chemistry," CoatingsTech Conference, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.
168. Stacy Sommer, Justin Daniels, Dean C. Webster, "Correlation of fouling-release field testing and laboratory biological analysis of siloxane-polyurethane coatings based on PDMS macromers," CoatingsTech Conference, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.
169. Xiao Pan, Partha Sengupta, Dean C. Webster, "High biocontent thermosetting coatings from epoxidized sucrose ester of fatty acids," CoatingsTech Conference, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.
170. Thomas J. Nelson, Dean C. Webster, "Waterborne monomer-grafted sucrose ester resins," CoatingsTech Conference, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.
171. Erin Saville, Neena Ravindran, Dean C. Webster, "Novel in-situ synthesis in the preparation of UV curable nanocomposite barrier coatings," CoatingsTech Conference, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.

172. Stacy Sommer, Abdullah Ekin, Rajan Bodkhe, Robert Pieper, Justin Daniels, Shane Stafslie, Dean C. Webster, Fouling-release field testing of siloxane-urethane coatings based on PDMS macromers," International Marine and Offshore Coatings Conference, Virginia Beach, Va., May 19-21, 2010.
173. Dean C. Webster, Abdullah Ekin, Robert Pieper, Stacy Sommer, Rajan Bodkhe, and Shane Stafslie, Maureen Callow and Stephanie Thompson, "Design and Optimization of Self-stratified Underwater Marine Coatings," International Marine and Offshore Coatings Conference, Virginia Beach, Va., May 18-20, 2009.
174. Mohammed J. Nasrullah, Dean C. Webster, "Using an automated reactor system to explore process and compositional variations in aqueous polyurethane dispersions," oral presentation, Materials Research Society Spring Meeting, San Francisco, Ca., April 13-17, 2009.
175. Robert J. Pieper, Scott M. Ennis, Mohammed J. Nasrullah, Dean C. Webster, "Exploration of process variables using automated parallel reactors for the semi-batch synthesis of acrylic polyols," oral presentation, Materials Research Society Spring Meeting, San Francisco, Ca., April 13-17, 2009.
176. Dean C. Webster, Abdullah Ekin, Robert Pieper, Rajan Bodkhe, Stacy Sommer, Justin Daniels, Shane Stafslie, "High throughput screening of non-toxic marine coatings: correlation of lab assays with field test results," oral presentation, Materials Research Society Spring Meeting, San Francisco, Ca., April 13-17, 2009.
177. Mohammed J. Nasrullah, Dean C. Webster, Vishal V. Sonalkar, Thanusha Koralage, "Evaluation of the effect of inhibitors on conventional and controlled free radical polymerization using a high throughput approach," poster presentation, Materials Research Society Spring Meeting, San Francisco, Ca., April 13-17, 2009.
178. Rajan B. Bodkhe, Dean C. Webster, Maureen E. Callow, Stephanie Thompson, "Fouling-release performance of siloxane-polyurethane coatings using combinatorial high throughput methods," poster presentation, Materials Research Society Spring Meeting, San Francisco, Ca., April 13-17, 2009.
179. Chavanin Siripirom, James Bahr, Dean C. Webster, "An automated instrument for high throughput screening of polymer toughness," poster presentation, Materials Research Society Spring Meeting, San Francisco, Ca., April 13-17, 2009.
180. Samali Datta, Muang Htet, Dean C. Webster, "Novel All Carbon-Based, UV-Curable Conductive Composites for Printed Microelectronics Applications," Materials Research Society Fall Meeting, Boston, Ma. December 1-5, 2009.
181. Mohammed J. Nasrullah, Thanusha Koralage, Vishal V. Sonalkar and Dean C. Webster, "US Penny - A Source of Copper Catalyst for Atom Transfer Radical Polymerization (ATRP)," Poster presented at ASBMB Undergraduate Affiliate Network and ACS Regional Meeting, October 17 & 18, 2008, MSUM, Moorhead, MN.
182. Kugel, Alex J.; Jarabek, Laura E.; Daniels, Justin W. ; Vander Wal, Lyndsi J.; Ebert, Scott M.; Jepperson, Michael J.; Stafslie, Shane J.; Pieper, Robert J.; Webster, Dean C.;



- Bahr, James and Chisholm, Bret J. Combinatorial materials applied to the development of new surface coatings XII: Novel environmentally friendly antimicrobial coatings derived from biocide-functional acrylic polyols and isocyanates," paper presented at FutureCoat! Chicago, Illinois, October 14-16, 2008. (Roon Foundation Award winner.)
183. Mohammed J. Nasrullah and Dean C. Webster, "Silicone resins containing polystyrene and poly(*t*-butyl acrylate) grafts as foul release coatings for marine applications, paper presented at FutureCoat! Chicago, Illinois, October 14-16, 2008.
184. Partha Sengupta, Xiao Pan, Dean C. Webster, "Waterborne long oil alkyd for coating wood," poster presentation at FutureCoat! Chicago, Illinois, October 14-16, 2008.
185. Robert J. Pieper, Scott M. Ennis, Mohammed J. Nasrullah, Shane J. Stafslie, Justin W. Daniels, and Dean C. Webster, "Novel Zwitterionic/Amphiphilic Penta-block Copolymer Acrylic-Urethane Coatings for the Application of Fouling-Release Marine Coatings," poster presentation at FutureCoat! Chicago, Illinois, October 14-16, 2008.
186. Stacy Sommer, Abdullah Ekin, Shane Stafslie, Justin Daniels, Stephanie Thompson, Maureen Callow, Dean C. Webster, "Fouling-Release Performance of Siloxane-Polyurethane Coatings Prepared with Siloxane Macromers," poster presentation at FutureCoat! Chicago, Illinois, October 14-16, 2008.
187. Mohammed J. Nasrullah, Shane Stafslie, Justin Daniels, Lyndsi Vander Wal, and Dean C. Webster, "Evaluation of Polyurethane Dispersion as Potential Fouling Release Coatings for Marine Applications," poster presentation at FutureCoat! Chicago, Illinois, October 14-16, 2008.
188. Rajan B. Bodhke, Stephanie Thompson, Maureen E. Callow, and Dean C. Webster, "Combinatorial High Throughput Exploration Of The Effect Of PDMS Molecular Weight and Amount on The Fouling Release Performance Of Siloxane-Polyurethane Coating," poster presentation at FutureCoat! Chicago, Illinois, October 14-16, 2008.
189. Dean C. Webster, Abdullah Ekin, Robert Pieper, Stacy Sommer, Rajan Bodhke, Shane Stafslie, Maureen Callow, Stephanie Thompson, "Toward tough fouling-release coatings: self-stratified siloxane-polyurethane coatings," International Congress on Marine Corrosion and Fouling, Kobe, Japan, July 2008.
190. Dipak Chattopadhyay, Autumn Zakula, Dean C. Webster, "Hybrid sol-gel coatings from glycidyl carbamate functional resins," Coatings Science International, Noordwijk, Netherlands, June 23-27, 2008.
191. D.K. Chattopadhyay, Autumn D. Zakula, Dean C. Webster, "Synthesis and Characterization of Organic-Inorganic Hybrid Materials from Glycidyl Carbamate Resin, 3-aminopropyltrimethoxysilane and Tetraethoxyorthosilicate," Gordon Research Conference on Composites, Ventura, Ca., Jan. 13-18, 2008.
192. D.K. Chattopadhyay and Dean C. Webster, "Novel Organic-Inorganic Hybrid Coatings Prepared from Glycidyl Carbamate Resin and 3-Aminopropyltrimethoxy Silane," Poster presented at ICE 2007, International Coatings Expo: Clean-Lean-Green: Innovative Solutions for the Global Coatings Community, Toronto, ON, Canada, Oct. 3-5, 2007.

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199. Douglas L. Schulz, Kristen Keller, Samali Datta and Dean Webster "Conducting Adhesives for Advanced Manufacturing," Spring Meeting of the Materials Research Society, San Francisco, Ca., April 2007.
200. Partha Majumdar, Shane Stafslie, Justin Daniels, Dean C. Webster, "High Throughput Combinatorial Characterization of Thermosetting Siloxane-Urethane Coatings Having Spontaneously Formed Microtopographical Surfaces," Presentation at the FutureCoat! Technical Conference, Federation of Societies of Coatings Technology, New Orleans, La., November 2006.
201. Robert J. Pieper, Franck Casse, Maureen Callow, Dean C. Webster, "A Combinatorial Approach to Study the Effect of Acrylic Polyol Composition on the Properties of Crosslinked Siloxane-Urethane Fouling Release Coatings," Presentation at the FutureCoat! Technical Conference, Federation of Societies of Coatings Technology, New Orleans, La., November 2006.

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203. Mohammed Nasrullah, Dean C. Webster, "Synthesis and Characterization of Polyurethane Dispersions – A Comparison of Traditional and Automated Methods," Poster presented at the *International Coatings Exposition*, New Orleans, La., November 2006.
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205. Samali Datta, Dean C. Webster, "Study of the Polymerization Behavior of Radiation Cured Conductive Composites," Poster presented at the *International Coatings Exposition*, New Orleans, La., November 2006.
206. Neena Ravindran, Dean C. Webster, "Effect of Method of In-situ Synthesis of Hyperbranched Polymer on Properties of Radiation Curable Polymer Clay Nanocomposites," Poster presented at the *International Coatings Exposition*, New Orleans, La., November 2006.
207. Abdullah Ekin, Dean C. Webster, "Library synthesis of organofunctional siloxanes, siloxane-poly(caprolactone) triblock copolymers and their use in advanced marine coatings", Poster Presentation, Gordon Research Conference on Combinatorial and High Throughput Materials Science, Oxford, UK, August 2005.
208. Partha Majumdar, Dean C. Webster, "Development of siloxane-urethane coatings having a microstructured surface topography", Poster Presentation, Gordon Research Conference on Coatings and Films, New London, New Hampshire, July 2005.
209. Zhigang Chen, Dean C. Webster, "Synthesis and use of novel sensitizers to enhance laser ablation of cationic UV curable coatings", Poster Presentation, Gordon Research Conference on Coatings and Films, New London, New Hampshire, July 2005. Selected as a best student poster at the conference.
210. Dean C. Webster, Partha Majumdar, Abdullah Ekin, James A. Bahr, David A. Christianson, "High Throughput Methods in the Development of Novel Marine Coatings," 12<sup>th</sup> *International Congress on Marine Corrosion and Biofouling*, Southampton, UK, July 2004.
211. Fawn M. Uhl, Dean C. Webster, Christine Gallagher-Lein, David A. Christianson, James Bahr, "High throughput determination of structure-property relationships in UV cured polymer films," 40<sup>th</sup> *International Symposium on Macromolecules*, Paris France, July 2004.
212. Heather A. Nash, Heidi J. Docktor, and Dean C. Webster, "Effect of composition on performance properties in cationic UV-curable coating systems," *International Coatings Exposition*, Philadelphia, Penn., November 12-14, 2003. (Roon Foundation Award winner.)

213. Fawn M. Uhl, Brian R. Hinderliter, Prashanth Davuluri, Stuart G. Croll, Shing Chung Wong, and Dean C. Webster, "Organically modified layered silicates in UV curable formulations," *International Coatings Exposition*, Philadelphia, Penn., November 12-14, 2003. (Best poster presentation award.)
214. Dean C. Webster, James W. Bennett, Sigrid C. Keubler, Mary Beth Kossuth, and Sigridur Jonasdottir, "High throughput workflow for the development of coatings," *International Coatings Exposition*, Philadelphia, Penn., November 12-14, 2003.

#### **PREPRINTS/PROCEEDINGS (abstracted by Chemical Abstracts)**

1. Dean C. Webster, Robert J. Pieper, Rajan B. Bodkhe, "Approaches to robust coatings with amphiphilic surfaces via self-stratification," *Polymer Preprints*, 52(2), 1032-1033, 2011.
2. Erin Saville, Neena Ravindran, Dean C. Webster, "Properties of UV-curable nanocomposites prepared using a novel in situ synthesis process," *Polymer Preprints*, 52(2), 100-101, 2011.
3. Dean C. Webster, "Polymers to coatings: principles for designing complex functional materials," *PMSE Preprints*, 105, 1180, 2011.
4. Rajan B. Bodkhe, Dean C. Webster, "Synthesis and characterization of novel  $\alpha$ ,  $\omega$ , functional siloxanes with PEG sidechains," *PMSE Preprints*, 105, 712-713, 2011.
5. Thomas J. Nelson, Xiao Pan, Teluka Galhenage, Dean C. Webster, "Thermally initiated crosslinking of highly functional biobased resins," *PMSE Preprints*, 105, 1057-1058, 2011.
6. Adlina Paramarta, Xiao Pan, Dean C. Webster, "Synthesis and photopolymerization of highly functional acrylated biobased resins," *Polymer Preprints*, 52, 522-523, 2011.
7. Rajan B. Bodkhe, Dean C. Webster, "Synthesis and characterization of novel functional amphiphilic/zwitterionic triblock copolymers using ATRP and ring opening equilibration polymerization," *Polymer Preprints*, 52, 359-360, 2011.
8. Stacy Sommer, Rajan Bodkhe, Dean C. Webster, "Synthesis and characterization of end-functional PDMS homopolymer molecular brushes," *Polymer Preprints*, 52, 392-393, 2011.
9. Xiao Pan, Dean C. Webster, "Novel biobased high functionality polyols and their use in polyurethanes," *Polymer Preprints*, 52, 74-75, 2011.
10. Rajan B. Bodkhe, Dean C. Webster, "Synthesis and characterization of novel amphiphilic siloxane-polyurethane fouling release coatings using click chemistry," *Polymer Preprints*, 52, 148-149, 2011.
11. Stacy Sommer, Joseph R. Byrom, Hanna D. Fischer, Rajan B. Bodkhe, Shane J. Stafslie, Justin Daniels, Carolyn Yehle, Dean C. Webster, "Effects of pigmentation on siloxane-polyurethane coatings and their performance as fouling-release marine coatings," *Proceedings of CoatingsTech Conference*, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.

12. Rajan B. Bodkhe, Stephanie E.M. Thompson, Carolyn Yehle, Nicholas Cilz, Justin Daniels, Shane J. Stafslie, Maureen E. Callow, James A. Callow, and Dean C. Webster, "The effect of formulation variables on the fouling-release performance of stratified siloxane-polyurethane coatings," Proceedings of CoatingsTech Conference, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.
13. Vinod Upadhyay, Umesh D. Harkal, Andrew J. Muehlberg, Nicholas Sauer, Dean C. Webster, Gordon P. Bierwagen, "Impact of polymer composition on electrochemical properties of coatings as determined by electrochemical impedance spectroscopy (EIS)," Proceedings of CoatingsTech Conference, American Coatings Association, Rosemont, Illinois, March 14-16, 2011.
14. Mohammed J. Nasrullah, Pooja Thapliyal, Vishal V. Sonalkar, Christy Gallagher-Lein, Dean C. Webster, "Synthesis of polyurethane dispersions using novel polypropylene carbonate polyols," *PMSE Preprints*, **2010**, 103, 108-109.
15. Xiao Pan, Partha Sengupta, Dean C. Webster, "Epoxy-anhydride curing of epoxidized sucrose esters of fatty acids," *PMSE Preprints*, **2010**, 103, 268-269.
16. Thomas J. Nelson, Dean C. Webster, "Monomer-grafted sucrose ester resins," *PMSE Preprints*, **2010**, 103, 406-407.
17. Umesh D. Harkal, Andrew J. Muehlberg, Peter A. Edwards, Dean C. Webster, "Novel waterborne glycidyl carbamate (GC) coatings," Proceedings of the American Coatings Conference, Charlotte, N.C., April 12-14, 2010.
18. Dean C. Webster, Abdullah Ekin, Robert Pieper, Stacy Sommer, Rajan Bodkhe, Shane J. Stafslie, Maureen Callow, Stephanie Thompson, "Marine Field Testing of Siloxane-polyurethane Fouling-Release Coatings," Proceedings of the American Coatings Conference, Charlotte, N.C., April 12-14, 2010.
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20. Partha Pratim Sengupta, Xiao Pan, Thomas J. Nelson, Adlina Paramarta, Dean C. Webster, "Cationic UV curing characteristics of epoxidized sucrose esters," *PMSE Preprints*, **2010**, 102, 888-889.
21. Dean C. Webster, "Reducing the environmental impact of protective and functional coatings," *PMSE Preprints*, **2010**, 102, 104.
22. Dean C. Webster, "Tailoring the surface properties of coatings through self-stratification," *PMSE Preprints*, **2010**, 102, 52.
23. Xiao Pan, Thomas J. Nelson, Dean C. Webster, "Novel enamine formation (EF) and air-drying (AD) co-curable coating resins: miscible blends of sucrose esters," *PMSE Preprints*, **2010**, 102, 759-760.
24. Erin Saville, Neena Ravindran, Dean C. Webster, "UV-curable nanocomposite barrier coatings with organically modified montmorillonite for flexible electronic devices," *PMSE Preprints*, **2010**, 102, 437-438.

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26. Mohammed J. Nasrullah, Vishal V. Sonalkar, Thanusha Koralage, Dean C. Webster, "Exploration of copper beads as catalyst for atom transfer radical polymerization of styrene," Polymer Preprints, **2008**, 49(2), 113-114.
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29. D. K. Chattopadhyay, Aaron Muehlberg, Dean C. Webster, "Organic-inorganic hybrid coatings prepared from glycidyl carbamate resin and amino-functional silane," PMSE Preprints, **2008**, 98, 883-884.
30. Ankit Vora, Neena Ravindran, Kunal Singh, Dean C. Webster, "Use of PDMS-functionalized unsaturated polyester for preparation of UV-curable coatings with modified surface properties," PMSE Preprints, **2008**, 98, 871-872.
31. Mohammed J. Nasrullah, Ankit Vora, Dean C. Webster, "Block copolymer synthesis by a combination of ATRP and RAFT via click chemistry using a high throughput approach," Polymer Preprints **2008**, 49(1), 422-423.
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35. Ankit Vora, Mohammed Nasrullah, Dean C. Webster, "Synthesis and characterization of a novel RAFT agent with epoxy group," PMSE Preprints **2007**, 97, 106-107.
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48. Zhigang Chen, Dean C. Webster, "Designed Carrier Gas UV Laser Ablation Sensitizers for Cationic UV Curable Coatings," *Technical Conference Proceedings - UV & EB Technology Expo & Conference*, Chicago, IL, April 24-26, 2006.

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50. Samali Datta, Saurabh Nanavati, Nathan Schuler, Robert Sailer, Dustin Vaselaar, Aaron Reinholz, Douglas Schulz, David Wells and Dean C. Webster, "Development of solvent-free UV-curable conductive inks for printed flexible microelectronics," Technical Conference Proceedings - UV & EB Technology Expo & Conference, Chicago, Il., April 24-26, 2006.
51. Mohammed J. Nasrullah, Dean C. Webster, "Polymerization of styrene and t-butyl acrylate by atom transfer radical polymerization - high throughput approach." *Polymer Preprints* 47(1), 217-218 (2006).
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## GRADUATE STUDENTS SUPERVISED

1. Vishesh Mishra, Ph.D. student.
2. Ayesha Rathnayake, Ph.D. student.
3. Sakiru Adeleke, Ph.D. student.
4. Nastaran Shahzadeh, Ph.D. student.
5. Ramsharan Pandey, Ph.D., April 2024, "Experimental and Computational Methods for the Development of Novel Environment-Friendly Materials for Different Applications."
6. Shokoofeh Ghasemi, Ph.D., April 2024, "Experimental Advances and Computational Modeling in Material Design for Optimal Performance and Sustainability."
7. Iryna Bon, Ph.D. student.
8. Wanli Cheng, M.S., January 2023, "Amphiphilic Marine Coatings System of Self-Layered PDMS-PEG Surface with an Epoxy-Polyurethane Matrix and its Critical Hydrophilic-Lipophilic Ratio (CHLR)."

9. Morgen Hagerott, M.S., December 2022, "Development of Ice Releasing Epoxy-Siloxane Marine Coatings."
10. Maryam Safaripour, Ph.D., July 2024, "Advancements in Surface-Modified Elastomers: Understanding Elastomer-Additive Compatibility and its Role on Surface Modification to Improve Ice and Biofouling Release."
11. Marta Vonsul, Ph.D., July 2024, "Advancing Sustainable Practices: Exploration of Plant Oil Biobased Precursors for Development of Functional Thermoset Polymer Materials and Coatings."
12. Michael Odegaard, Ph.D. Student.
13. Joseph Dahlgren, Ph.D., May 2024, "Investigation of Amphiphilic Polymers for Modification of Surface Properties in Marine Fouling-Release Coatings."
14. Jonas Sahouani, Ph.D. Student.
15. Hannah Booher, Ph.D. Student.
16. Alexander Hart, Ph.D., March 2023, "Exploration of Novel Sustainable Thermosets for High Performance Materials."
17. Shikhin Nadkarni, Ph.D. Student.
18. Raul Setien, Ph.D., December 2022, "Sustainable thermosetting polymers: biobased epoxy resin systems and aqueous non-isocyanate polyurethanes."
19. Jackson Benda, Ph.D., May 2022, "Surface modifying amphiphilic additives for the improvement of fouling-release properties of siloxane-polyurethane coatings."
20. AliReza Rahimi, Ph.D. May 2020, "Investigation of novel approaches for improved amphiphilic fouling-release coatings."
21. Samantha Silbert, Ph.D., December 2019, "Epoxidized sucrose soyate and derivatives as bioderived crosslinkers in various thermosets."
22. Eric Krall, Ph.D., May 2019, "Development of novel kraft lignin resins for use in thermoset materials."
23. Alison Rohly, Ph.D., May 2019, "Improving sustainability in protective coating systems."
24. Jimmy Docken, M.S. Student.
25. Arvin Yu, Ph.D. December 2017, "Highly Functionalized Thermosets from Renewables for Composites and Coatings Applications."
26. Madhura Pade, Ph.D. December 2018, "Influence Of Surface Topography And Curing Chemistry On Fouling-Release Performance Of Self-Stratified Siloxane-Polyurethane Coatings."

27. Teluka Galhenage, Ph.D., December 2016, "Surface Optimization of Siloxane-Polyurethane Marine Coatings for Improved Fouling-Release Properties."
28. Adlina Paramarta, Ph.D. December 2016, "High Performance Bio-based Thermosets for Composites and Coatings."
29. T.J. Nelson, Ph.D., February 2013, "Novel biobased resins for high performance coatings."
30. Erin Saville Pavlacky, Ph.D. Student, January 2012, "Novel hybrid polymeric materials for barrier coatings."
31. Chavanin Siripirom, Ph.D., March 2012, "High-throughput characterization of the mechanical properties of coatings."
32. Rajan Bodkhe, Ph.D., August 2011, "Amphiphilic siloxane-polyurethane coatings."
33. Xiao Pan, Ph.D., May 2011, "Novel biobased resins using sucrose esters of plant oils."
34. Stacy Sommer, Ph.D. April 2011, "Siloxane-polyurethane fouling-release coatings based on PDMS macromers."
35. Umesh Harkal, Ph.D., September 2010, "Low VOC coating systems from novel glycidyl carbamate resins."
36. Robert Pieper, Ph.D., September 2010, "Surface Property Modification of Coatings Via Self-Stratification."
37. Samali Datta, Ph.D. September 2009, "Design and Characterization of Environmentally-friendly Printable Conductive Composites."
38. Ankit Vora, Ph.D., May 2008, "Synthesis and characterization of novel functional polymeric materials."
39. Abdullah Ekin, Ph.D., January 2007, "Siloxane-polyurethane marine coatings."
40. Roopashree Suryanarayana, M.S., October 2006, "Zero-VOC Binder System from Glycidyl Carbamate Functional Resins."
41. Partha Majumdar, Ph.D., August 2006, "Thermosetting Siloxane-Urethane Fouling-Release Coatings."
42. Zhigang Chen, Ph.D., May 2006, "Development of cationic UV curable materials for flexible microelectronics encapsulation."
43. Neena Ravindran, Ph.D., January 2006, "High performance UV curable polymers and polymer-clay nanocomposite thin films for advanced electronic applications."
44. Peter A. Edwards, Ph.D., December 2004, "Glycidyl carbamate resins to achieve polyurethane properties and epoxide reactivity."

45. Heather A. Nash (Goulet), Ph.D., December 2003, "The use of cycloaliphatic epoxides in latex and UV-curable coatings."

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Dr. Fawn M. Uhl, Ph.D., Marquette University, Currently at Owens-Corning.

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