Curriculum Vitae

Christopher W. Jones

PERSONAL

Title:	Professor and William R. McLain Chair of Chemical & Biomolecular Engineering
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EDUCATION

B.S.E.	Chemical Engineering	1995	University of Michigan, *Summa Cum Laude*
M.S.	Chemical Engineering	1997	California Institute of Technology
Ph.D.	Chemical Engineering	1999	California Institute of Technology
Fellow	Chemistry	2000	California Institute of Technology

PROFESSIONAL EXPERIENCE

2018-present	Professor and William R. McLain Chair of Chemical & Biomolecular Engineering, Georgia Institute of Technology
2020-present	Adjunct Professor, Chemical and Biomolecular Engineering, KAIST (S. Korea)
2015-2018	Love Family Professor, School of Chemical & Biomolecular Engineering, Georgia Institute of Technology
2014-present	Deputy Director, *Center for Understanding and Control of Acid Gas-Induced Evolution of Materials for Energy*
2018-2019	Associate Vice President for Research, Georgia Institute of Technology
2018	Interim Executive Vice-President for Research, Georgia Institute of Technology
2013-2018	Associate Vice President for Research, Georgia Institute of Technology
2011-2015	New-Vision Professor, School of Chemical & Biomolecular Engineering, Georgia Institute of Technology
2008-2010	Professor, School of Chemical & Biomolecular Engineering, Georgia Institute of Technology
2005-2008	Associate Professor and J. Carl and Sheila Pirkle Faculty Fellow, School of Chemical & Biomolecular Engineering, Georgia Institute of Technology
2003-	Adjunct Professor, School of Chemistry and Biochemistry, Georgia Institute of Technology
2000-2005	Assistant Professor, School of Chemical & Biomolecular Engineering Georgia Institute of Technology

HONORS AND AWARDS

2021 Georgia Tech Award for Outstanding Achievement in Research Innovation
2021 Kwang-Yu and Lee-Chien Wang Lecture, University of Rochester
2020 Dreyfus Foundation Chemistry Shorts Film, https://chemistryshorts.org/
2019 Global Distinguished Lectureship, KAIST
2019 Ensor Lectureship, Washington State University
2018- William R. McLain Chairholder
2018 William H. Schwarz Lecture, Johns Hopkins University
2016 Andreas Acrivos Award for Professional Progress in Chemical Engineering, American Institute of Chemical Engineers
2015-2018 Love Family Professorship
2015 Fellow of the American Chemical Society
2015 Sigma Xi Best Faculty Paper Award
2015 Golden Goggles Lectureship, Middle Tennessee State University (student selected)
2014 Fellow of the American Association for the Advancement of Science
2014 US Frontiers of Engineering, National Academy of Engineering, Program Organizer
2013 Curtis W. McGraw Research Award, American Society of Engineering Education
2013 Paul H. Emmett Award in Fundamental Catalysis, North American Catalysis Society
2012 US Frontiers of Engineering, National Academy of Engineering, Invited Speaker
2012 Georgia Tech Award for Outstanding Achievement in Research Program Development
2011 Distinguished Lecturer, Hong Kong Baptist University
2011 Georgia Tech Award to the Outstanding Faculty Research Author
2011-2015 New-Vision Professorship
2010 Founding Editor in Chief, *ACS Catalysis*
2010 Eastman Lectureship, University of Virginia (student selected)
2010 Robert W. Vaughan Lectureship, Caltech
2010 Ipatieff Prize, American Chemical Society
2008 Dreyfus Foundation Fellowship in Environmental Chemistry
2008 Hesburgh Teaching Fellow
2005 US Frontiers of Engineering, National Academy of Engineering, Invited Participant
2005-2008, 2010-2011 J. Carl and Sheila Pirkle Faculty Fellowship
2005 DuPont Young Faculty Award
2004 Sigma Xi Young Faculty Award
2004 CETL/BP Junior Faculty Teaching Excellence Award
2002 Faculty Career Initiation Award, Shell Oil Company Foundation
2002 CAREER Award, National Science Foundation
2001 Ralph Powe Junior Faculty Award, Oak Ridge Assoc. Univ.
1999 Union Carbide Innovation Recognition Award
1995 William Corcoran Fellowship, Caltech
1994-1995 James B. Angell Scholar, Michigan
1992 William Branstrom Freshman Prize, Michigan

PROFESSIONAL SOCIETY MEMBERSHIPS

1993- American Institute of Chemical Engineers
1997- North American Catalysis Society
1998- American Chemical Society
2004- Organic Reactions Catalysis Society
2005- American Society of Engineering Education
2010- International Adsorption Society
2010- American Association for the Advancement of Science

PROFESSIONAL SERVICE

AIChE – American Institute of Chemical Engineers

2002-2005, 2008-2011 Director, Catalysis and Reaction Engineering Division.

ACS – American Chemical Society

2008-2011, 2014-2017	Executive Board, Division of Catalysis Science and Technology
2003	Symposium Chair, "Surface Science and Catalysis," *77th ACS Colloid and Surface Science Symposium*, Atlanta, GA, June 2003.
	Unnamed ACS Award Selection Committees, Three years

IAS – International Adsorption Society

2016-2022	Director
	Co-Chair, 14th International Conference on Fundamentals of Adsorption

NACS – North American Catalysis Society

2017-	Vice President (re-elected in 2021)
2008-2009	Executive Board, *Keith Hall Educational Fund Trustee*
	Unnamed Award Selection Committees, Ten years

ORCS - Organic Reactions Catalysis Society

2008-2016	Executive Board, Representative to the *North American Catalysis Society*.

US National Academies

2017-2018	Panel on Negative Emissions Technologies and Reliable Sequestration: A Research Agenda; Co-lead of technology assessment on Direct Air Capture (DAC) technologies for atmospheric CO_2 reduction. http://nas-sites.org/dels/studies/cdr/

EDITORIAL ACTIVITIES AND JOURNAL ADVISORY BOARDS

2015- Editorial Board, *Annual Reviews in Chemical & Biomolecular Engineering*
2012-2015 Editorial Board, *ChemSusChem*
2010-2011 Editorial Board, *Catalysis Letters*
2007-2010 Editorial Board, *Applied Catalysis A: General*
2007-2010 Editorial Board, *Journal of Molecular Catalysis A: Chemical*

American Chemical Society Publications
2010-2020 Editor-in-Chief, *ACS Catalysis* (inaugural)
2020- Editor-in-Chief, *JACS Au* (inaugural)
Chair, Editorial Compensation Task Force
Chair, Manuscript Transfer Task Force

Chair, 2017 Conference of Editors
Member, Peer Review Advisory Group
Member, Ethics Committee
Chair, Editor-in-Chief Search Committee, two un-named journals
Member, Editor-in-Chief Search Committee, one un-named journal

REVIEWING ACTIVITIES

Manuscript Reviews (778 Total) Journals with 10 or more reviews listed, through 2020:

Journal of the American Chemical Society (57), Journal of Catalysis (35), Journal of Molecular Catalysis A. (31), Chemical Communications (37), Applied Catalysis A. (26), Industrial & Engineering Chemistry Research (32), Angewandte Chemie International Edition (38), Advanced Synthesis and Catalysis (21), Chemistry of Materials (25), Langmuir (21), Microporous and Mesoporous Materials (20), Journal of Physical Chemistry (18), Macromolecules (16), Journal of Materials Chemistry (17), Catalysis Letters (18), Organometallics (12), ChemSusChem (22), ChemCatChem (11), Chemistry A European Journal (15), Energy & Environmental Science (11), AIChE Journal (16), ACS Applied Materials & Interfaces (17) Chemical Engineering Journal (10), ACS Sustainable Chemistry and Engineering (12)

Proposal Reviews:

- Oak Ridge National Laboratory – Center for Nanophase Materials Science User Proposals
- ERC Programs at NSF
- Chemistry (Math-Physical Sciences Program) at NSF
- Chemical Transport Systems (Engineering Program) at NSF
- SBIR, Advanced Materials and Manufacturing at NSF
- American Chemical Society Petroleum Research Fund
- Department of Energy, Office of Basic Energy Sciences
- Department of Energy, National Energy Technology Laboratory
- Science Foundation of Ireland – Zero Emissions Prize Panel - 2021

Program Reviews:

DOE BES Catalysis Program – Lawrence Berkeley National Laboratory, 2011
DOE BES Catalysis Program – Pacific Northwest National Laboratory, 2018
DOE BES EFRCs
DOE BES Center for Functional Nanomaterials, 2019

School of Chemical Engineering, Dalian University of Technology, China 2019
College of Engineering, University of Concepcion, Chile 2019, 2020

RESEARCH INTERESTS

Direct Air Capture of CO_2, Catalysis, Adsorption, Synthetic Materials Chemistry, Porous Materials, Reaction Engineering, Separations

SUMMARY OF TEACHING/MENTORING PHILOSOPHY & ACCOMPLISHMENTS

Courses Taught:

ChBE 2100 Chemical Process Principles
Sp 2001, Fa 2005, Su 2011, Su 2013, Fa 2016

ChBE 4300 Kinetics and Reactor Design
Fa 2001, 2002, Sp 2003, Su 2008, 2012

ChBE 4515 Chemical Process Safety
Sp 2002, 2004, 2006, 2007, 2011, 2012, 2013, 2014, 2018, 2019, 2021 Su 2002, 2003, 2004, 2006, 2007, Fa 2017,

ChBE 4535 Chemical Product Design, Optimization and Engineering
Fa 2003, 2004, 2005, 2006, 2020, 2021

ChBE 4803/8803 Catalytic Chemistry and Engineering, Sp 2005, Fa 2010

ChBE 4803/8801 Technical Leadership, Professionalism & Decision-Making, Sp 2022

ChBE 6300 Kinetics and Reactor Design
Sp 2008, Fa 2008, 2009, Fa 2019

ChBE 8803 Nanotechnology in Chemical Engineering
Fa 2003

Teaching and Curriculum Accomplishments

1. Conceived, developed and taught first offering of ChBE 4535, Chemical Product Design, Optimization and Engineering in 2003. Secured $150K curriculum development grant from P&G Foundation. This popular elective has been taught since 2003 by 4 different ChBE faculty.

2. Conceived, developed and taught first offering of ChBE 8803, Nanotechnology in Chemical Engineering. Now fully re-worked by Sankar Nair as ChBE 4020 Chemical Engineering at the Nanoscale.

3. Honored with CETL/BP Junior Faculty Teaching Excellence Award and Hesburgh Teaching Fellowship, recognizing teaching and educational activities.

4. Conceived of the Open Forum on Energy and the Environment, a cross-disciplinary lecture and discussion series that ran from 2008-2010, bringing together dozens of researchers and students from across campus to discuss contemporary energy and environmental issues.

5. Co-Founded Academic Career Preparation Course (2018), “Do You Want to Be an Academic?” that is taught annually by a triumvirate of faculty from ChBE, ECE & BME.

Undergraduate Teaching Philosophy

1. Instill a sense of personal responsibility in students, encouraging them to take control of their learning and development.

2. Show students that chemical engineering is fun and share its important role in shaping the world.

3. Ensure students connect the "big picture of chemical engineering" with their problem solving, to ensure students can both solve problems and explain core chemical engineering concepts.

4. Interconnect learning and fundamental concepts in chemistry and chemical engineering whenever possible.

Graduate Mentoring Philosophy

1. Treat each student as an individual and learn his/her weaknesses, strengths, goals and aspirations to tailor a learning environment to maximize their personal and intellectual growth. Make advising fit the student; do not make the student fit the advisor.

2. Instill in each student that they should strive to be the best at their endeavors, but also that they have the responsibility to help those around them to excel and meet their individual goals as well. The success of each student comes from diligent individual effort, but also from the work of the generations of students before them and via collaboration and assistance from their current group-mates. We seek collective excellence.

3. Inspire students to make a lasting impact in science and engineering through their research.

4. Not all problems need to be solved. Teach students to target important problems.

Current Research Group:

12 PhD students, 8 men, 4 women, 4 under-represented minorities
9 Postdocs and Research Scientists, 5 men, 4 women, 1 under-represented minority

SUMMARY OF SERVICE ACTIVITIES

School, College and Institute Service (Highlights)

Institute

2021- Co-Director, DirACC, The Georgia Tech Direct Air Capture Center https://sites.gatech.edu/dac-center/
2020 Chair, Restarting Research COVID Response Commission
2018 Interim Executive Vice-President for Research
2016- Chair, Institute Council on Environmental Health and Safety
2013-2018, 2018-2019 Associate Vice President for Research
2012-2013 Industry Contracting Task Force
2009-2011 Chemical and Environmental Safety Committee
2003-2004 Nanoscience and Technology Steering Committee

2015, 2019 Search Committee for Director of GTRI

College of Engineering

2014- Deputy Director, *Center for Understanding and Control of Acid Gas-Induced Evolution of Materials for Energy* (UNCAGE-ME)
2012 Strategic Planning Committee

College of Science

2019-2020 School Chair Review & Reappointment Committee Chair, Chemistry and Biochemistry

2012-2013 School Chair Search Committee, Chemistry and Biochemistry

School of Chemical & Biomolecular Engineering

2005-2012 Chair, Graduate Studies Committee
- *Conducted PhD Qualifying Exams*
- *Instituted TA Review system*
- *Created multiple new graduate student awards*
- *Reviewed programmatic petitions from graduate students*

2002-2015 Member, Graduate Studies Committee
- *Led review of PhD Qualifying Exam format and policies*
- *Contributed to new (current TA system), whereby students TA 3-4 times during their PhD studies. Previous policy had every student acting as a TA every term.*

2013-2016 Chair, Faculty Search Committee
2020 Member, Faculty Search Committee
2002-2007, 2012 Member, Endowed Chair Search Committee

2001-2003, 2006-2008, 2019-2021 Member, Faculty Advisory Committee

INVITED RESEARCH SEMINARS & LECTURES

2021

Kwang-Yu and Lee-Chien Wang Lecture (Student Selected), *University of Rochester*, Department of Chemical Engineering, October
Louisiana State University, Department of Chemical Engineering, September
18th International Conference on Carbon Capture, Sequestration & Utilization (ICCDU), Keynote Lecture, S. Korea (Virtual), July.
International Conference on Materials for Humanity, Singapore (Virtual), July.
FEZA 2021 (Federation of European Zeolite Associations), Plenary Lecture, UK (Virtual), July
2nd Competitive Energy Systems Symposium, AIChE, Plenary Lecture, April
Michigan Catalysis Society, February

2020

Carbon Capture Symposium, *UC Irvine*, (Virtual) December
NISER, Department of Chemistry, Bhubaneswar, India, March
EPFL Lausanne, Chemistry and Chemical Engineering, Lausanne, Switzerland, February
EPFL Lausanne, Chemistry and Chemical Engineering, Sion, Switzerland, February
ETH Zurich, Department of Mechanical & Process Engineering, Zurich, Switzerland, February
Institute of Technical Chemistry, *University of Valencia*, Valencia, Spain, February

2019

Carnegie Mellon University, Department of Chemical & Biomolecular Engineering, November.
North Carolina State University, Department of Chemical & Biomolecular Engineering, October.
UOP Invitational Lecture Series, Des Plaines, IL, October.
Ensor Lecture, *Washington State University*, WA, October
Global Distinguished Lectures, *KAIST*, Daejon, S. Korea, October
268th ACS National Meeting, CATL Award Session, San Diego, CA, August
IIT Kanpur, Kanpur, India, July
Indian Institute of Science, Bangalore, India, July
CSIR-Central Leather Research Institute, Chennai, India, July
International Zeolite Conference, Keynote Lecture, Perth, Australia
Dalian University of Technology, China, June
Jilin University, Changchun, China, June
Gordon Research Conference – Carbon Capture Sequestration & Utilization, Les Diablerets, Switzerland, May.
EPRI Energy & Climate Seminar, Washington DC, April
267th ACS National Meeting, Ipatieff, George Olah Award Symposia, Orlando, FL, March.
267th ACS National Meeting, Ipatieff, Ipatieff Prize Symposia, Orlando, FL, March.
20th Netherlands' Catalysis and Chemistry Conference, Plenary Lecture, Noordwijkerhout, Netherlands, March

2018

MRS Fall Meeting, Boston, MA, November
R. H. Wilhelm Award Session honoring Robert J. Davis, *AIChE Annual Meeting*, Pittsburgh, PA, October
Oklahoma State University, Department of Chemical Engineering, August.
Advancement and Prospects for Catalysis Science and Technology, Plenary Lecture, Sydney, Australia
18th International Symposium on the Relationships Between Homogeneous and Heterogeneous Catalysis, Keynote Lecture, Sydney, Australia
Zhejiang University, Department of Energy Engineering, China, May
Rutgers University, Department of Chemical & Biochemical Engineering, April.
Princeton University, Department of Chemistry, April.
William H. Schwarz Lecture, *Johns Hopkins University*, February
KAUST Research Conferences: New Challenges in Heterogeneous Catalysis KAUST, Saudi Arabia, January

2017

Emory University Emerson Lectureship Symposium (Awardee Emily Carter), November.
Xinda Lecturer, Department of Chemistry, *Peking University*, China, October
Shanghai Normal University, Department of Chemistry, China, October
Andreas Acrivos Award, Plenary Lecture, *AIChE Annual Meeting*, Minneapolis, MN, October
University of Concepcion, Department of Chemical Engineering, Concepción, Chile, September
New York University, Department of Chemical Engineering, New York, NY September
254th ACS National Meeting, Henry Storch Award Symposium, Wash. DC, August
Gordon Research Conference – Carbon Capture Sequestration & Utilization, New London, NH, June.
MRS Spring Meeting, Phoenix, AZ, April
Seton Hall University, Department of Chemistry, Orange, NJ, March
University of Victoria, Department of Chemistry, Victoria, BC, Canada, February
7th Asia Pacific Congress on Catalysis, Keynote Lecture Mumbai, India, January

2016

Solvay Conference on Chemistry, Brussels, Belgium, October
252nd ACS National Meeting, Philadelphia, PA, August
Conference on Catalytic Activation and Selective Conversion of Energy-Related Molecules, Plenary Lecture, Xiamen, China, July
16th International Congress on Catalysis, Beijing, China, July
Linde AG, Munich, Germany, June
Northwestern University, Department of Chemical and Biological Engineering, Evanston, IL, May
University of Illinois, Department of Chemical and Biomolecular Engineering, Champaign, IL, March
251st ACS National Meeting, Ipatieff Prize Award Symposium, San Diego, CA, March
Pennsylvania State University, Department of Chemical Engineering, University Park, PA, February

2015

PacificChem 2015, Honolulu, HI, December
Columbia University, Department of Chemical Engineering, November
Department of Energy, Energy Frontier Research Center Conference, October
Colorado School of Mines, Department of Chemistry, October
National Renewable Energy Laboratory, Golden, CO, October
Europacat XII, Keynote Lecture, Kazan, Russia, September
International Mesostructured Materials Symposium - 9, Keynote Lecture, Brisbane, Australia, August
US-Korea Conference on Science, Technology and Entrepreneurship, Atlanta, August
CCHF Virtual Symposium, Emory University, July
8th International Conference on Carbon Dioxide Utilization, Plenary Lecture, Singapore, July
Corning, Inc., Corning, NY, June
Clemson University, Department of Chemistry, April
University of California, Berkeley, Energy Biosciences Institute, April
Golden Goggles Lecture, *Middle Tennessee State University*, March
Michigan Catalysis Society, Livonia, MI, March
KAUST Research Conferences: Catalytic Carbon and Hydrogen Management, KAUST, Saudi Arabia, February

2014

University of Wisconsin, Department of Chemical and Biological Engineering, December
ETH Zurich, Department of Mechanical and Process Engineering, November
University of South Florida, Department of Chemical and Biomedical Engineering, November
Pohang Institute of Science and Technology, Department of Chemical Engineering, October
KIChE Annual Meeting, Daejeon, South Korea, October
University of Nevada, Reno, Department of Chemistry, Reno, NV, October
248th ACS National Meeting, San Francisco, CA, August
7th International Symposium on Nanoporous Materials, Plenary Lecture, Niagara Falls, Canada, June
TOCAT-7: 7th Tokyo Conference on Advanced Catalytic Science and Technology, Plenary Lecture, Kyoto, Japan, June
Southwest Catalysis Society, Department of Chemical Engineering, Houston, TX, April
247th ACS National Meeting, Keynote Lecture, Dallas, TX, March
University of Houston, Department of Chemical Engineering, Houston, TX, February
Naval Research Laboratory, Washington DC, January
Philadelphia Catalysis Club, Wilmington, DE, January

2013

ONR Alternative Fuels Feedstock Program, Atlanta, GA, December
Workshop on Mesostructured Materials and Their Applications in Nanocatalysis, Taipei, Taiwan, October.
6th Asia Pacific Congress on Catalysis, Plenary Lecture, Taipei, Taiwan, October.
Southeastern Catalysis Society Annual Meeting, Keynote Lecture, Asheville, NC, September.

16th Symposium on the Relations Between Homogeneous and Heterogeneous Catalysis, Keynote Lecture, Hokkaido, Japan, August.
23rd North American Catalysis Society, Paul H. Emmett Award in Fundamental Catalysis Plenary Lecture, Louisville, KY, June.
Catalysis Club of Chicago, Spring Research Symposium, Keynote Speaker, Chicago, IL, May.
245th ACS National Meeting, George Olah Award Symposium, New Orleans, LA, April.
University of South Alabama, Spring Research Forum, Plenary Speaker, Mobile, AL, March.
The Dow Chemical Company, Freeport, TX, March.
Stanford University, Department of Chemical Engineering, Palo Alto, CA, January.

2012

Materials Genome Initiative Workshop, NSF, December
Southampton University, Department of Chemistry, Southampton, UK, October.
AIChE Annual Meeting, Pittsburgh, PA, October.
Eastman Chemical Company, Kingsport, TN, October.
US Frontiers of Engineering Conference, Warren, MI, September.
Texas A&M University, Student Selected Speaker, Department of Chemistry, May.
Vanderbilt University, Department of Chemical Engineering, April.
University of Tennessee, Knoxville, Department of Chemistry, March.
Direct Air Capture Summit, Calgary, Canada, March.
243rd ACS National Meeting, San Diego, CA, March.
243rd ACS National Meeting, Gabor Somorjai Award and George Olah Award Symposium, San Diego, CA, March.
Princeton University, Department of Chemical and Biological Engineering, February.
University of Notre Dame, Department of Chemical and Biomolecular Engineering, February.
Tufts University, Department of Chemical and Biological Engineering, February.
University of Colorado, Department of Chemical and Biomolecular Engineering, January.

2011

Chevron Phillips Chemical, Kingwood, TX, November.
Iowa State University, Department of Chemical and Biological Engineering, November.
BASF Catalysts, Iselin, NJ, November.
Department of Energy – Catalysis Science Contractor's Meeting, Annapolis, MD, October.
Seton Hall University, Bob Augustine – 50 years at Seton Hall Symposium, October.
Hong Kong Baptist University, HKBU Distinguished Lectureship, September (2 Lectures).
City University of Hong Kong, September.
GCEP Carbon Capture Workshop, Stanford University, Palo Alto, CA, May 2011.
Metro NY Catalysis Society, Somerset, NJ, April 2011.
Emory University Emerson Lectureship Symposium (Awardee Ei-ichi Negishi, Nobel Prize Chemistry 2011), Atlanta, GA, April.
The Dow Chemical Company, Midland, MI; March.
241st ACS National Meeting, Anaheim, CA, March.
241st ACS National Meeting, Gabor Somorjai Award Symposium, Anaheim, CA, March 2011.

Michigan Catalysis Society, Livonia, MI, March.
Columbia University, Department of Earth and Environmental Engineering, February.
Pacific Northwest National Laboratory, Richland, WA, January

2010

AIChE Annual Meeting, Salt Lake City, UT, November.
Frontiers of Heterogeneous Catalysis - 3rd International Symposium of the Catalysis Research Center – Technische Universität München, Garching, Germany, October.
Dow Benelux, Terneuzen, Netherlands, October.
Lehigh University Nano-Energy Conference, Bethlehem, PA, September.
Lehigh University, Department of Chemical Engineering, September.
Mississippi State University Biofuels Conference, Jackson, MS, August.
Osaka University, Department of Materials Science and Engineering, May.
University of Florida, Department of Chemical Engineering, April.
*The Ohio State University***,** Department of Chemistry, April.
239th American Chemical Society National Meeting, Ipatieff Prize Award Lecture, San Francisco, CA, March.
University of Virginia, Student Selected Eastman Lecturer, Department of Chemical Engineering, February.
University of North Carolina, Chapel Hill, Department of Chemistry, February.
DuPont Central Research and Development, Experimental Station, Wilmington, DE, January.

2009

University of Pennsylvania, Department of Chemical and Biomolecular Engineering, November.
AIChE Annual Meeting, Nashville, TN, November.
5th Sino-US Conference on Chemical Engineering, Beijing, China, October.
California Institute of Technology, Robert W. Vaughan Lecture, Division of Chemistry and Chemical Engineering, October.
University of Delaware, Department of Chemical Engineering, September.
14th International Symposium on the Relationships Between Homogeneous and Heterogeneous Catalysis, Keynote Lecture, Stockholm, Sweden, September, 2009.
Georgia Institute of Technology, School of Civil & Environmental Engineering Lafarge Symposium, May.
UOP Invitational Lecture Series, Des Plaines, IL, April.
Northwestern University, Center for Catalysis and Surface Science, April.
237th ACS National Meeting, Salt Lake City, UT, March.
Gordon Research Conference – Chemical Reactions at Surfaces, Ventura, CA, February.
Texas A&M University, Artie McFerrin Department of Chemical Engineering, January.

2008

Massachusetts Institute of Technology, Department of Chemical Engineering, Cambridge, MA, December.
Stanford University, Global Climate Change and Energy Symposium, Palo Alto, CA, December.
Georgia Tech Foundation, Quarterly Meeting, Atlanta, GA, September.

ASME 3rd Energy Nanotechnology International Conference, Jacksonville, FL, August.
Catalysis for Sustainable Society, Yonsei University, Seoul, South Korea, July.
Inha University, Department of Chemistry, Incheon, South Korea, July.
Greek Governmental Forum on Green Entrepreneurship, Athens, Greece, July.
Audience included Deputy Minister of Foreign Affairs of the Greek Government, Minister of Foreign Affairs, Minister of Development, Members of Parliament and the President of the Republic.
Stanford University, Department of Chemical Engineering, Palo Alto, CA, May.
235th ACS National Meeting, Gabor Somorjai Award Symposium, New Orleans, LA, April.
University of Minnesota, Department of Chemical Engineering and Materials Science, Minneapolis, MN, March.
The Dow Chemical Company, Core Research and Development Laboratory, Midland, MI, January.

2007

University of Tokyo, Department of Chemistry, Tokyo, Japan, October.
International Symposium on Nano-Space Catalysis, Kanagawa University, Yokohama, Japan, October.
University of Illinois, Urbana Champaign, Department of Chemical and Biomolecular Engineering, Urbana, IL, October.
Micromeritics Inc., Norcross, GA, October.
Mississippi State University, School of Chemical Engineering, Starkville, MS, October.
Technical University of Eindhoven, Department of Chemistry and Chemical Engineering, Eindhoven, Netherlands, September.
Technical University of Munich, Department of Technical Chemistry, Munich, Germany, September.
20th North American Catalysis Society Meeting, Keynote Lecture, Houston, TX, June.
Chevron Research and Technology Company, Houston, TX, April.
Dow Benelux, Terneuzen, Netherlands, February.
Universiteit van Amsterdam, Van't Hoff Institute of Molecular Sciences, Amsterdam, Netherlands, February.

2006

University of California, Davis, Department of Chemical Engineering and Materials Science, October.
Gordon Research Conference – Catalysis, Colby Sawyer College, New London, NH, June.
California Institute of Technology, Chemical Engineering, May.
231st ACS National Meeting, Gabor Somorjai Award Session, Atlanta, GA, March.
Tennessee Technological University, Department of Chemical Engineering, February.
Purdue University, Department of Chemical Engineering, January.
University of Colorado, Department of Chemical and Biological Engineering, January.

2005

The Dow Chemical Company, Freeport, TX, November.
China/USA/Japan Joint Chemical Engineering Conference, Beijing, China, October 2005.
Texas A&M University, Department of Chemical Engineering, October.
Lonza Group Ltd., Visp, Switzerland, July.
79th ACS Colloid and Interface Science Symposium, Potsdam, NY, June.
Department of Energy – National Energy Technology Laboratory, Pittsburgh, PA, May.
Department of Energy – Catalysis Contractor's Meeting, Rockville, MD., May.
University of South Carolina, Department of Chemical Engineering, April.
University of North Carolina, Chapel Hill, Department of Chemistry, March.
University of Michigan, Department of Chemical Engineering, March.
229th ACS National Meeting, E.V. Murphree Award Session, San Diego, CA, March.
229th ACS National Meeting, George A. Olah Award Session, San Diego, CA, March.

2004

University of Texas, Department of Chemical Engineering, November
Eastman Chemical Company, Kingsport, TN, September.
Oak Ridge National Laboratory, Oak Ridge, TN, August.
University of Pittsburgh, Department of Chemical & Petroleum Engineering, April.

2003

Degussa, Calvert City, KY, October.
Lehigh University, Department of Chemistry, October.

Virginia Polytechnic Institute and State University, Department of Chemical Engineering, October.
University of Windsor, Department of Chemistry, October.
Wayne State University, Department of Chemistry, October.
University of Virginia, Department of Chemical Engineering, October.
Georgia Institute of Technology, School of Chemistry and Biochemistry, May.
3rd Chemical Engineering Conference for Collaboration in the Eastern Mediterranean, Thessalaniki, Greece, May.
University of Florida, Department of Chemical Engineering, February.

CONTRACTS & GRANTS

Research Funds generated to date: >$71M (>$25M for Jones Lab)

2021-2023 ARPA-E
Wind-driven Direct Air Capture System using 3D Printed, Passive, Amine-loaded Contactors
Ryan P. Lively, Matthew J. Realff, Christopher W. Jones
Amount of Proposal: $783,738

2020-2022 DOE-NETL
MIL-101 (Cr)-Amine Sorbents Evaluation Under Realistic Direct Air Capture Conditions
Christopher W. Jones, Ryan P. Lively, Matthew J. Realff
Amount of Proposal: $755,166

2020-2023 DOE-BES
Understanding Degradation Mechanisms of Aminopolymers Used in Direct Air Capture
Simon Pang, Bryan Pivovar, Carsten Sievers, Christopher W. Jones (LLNL Lead)
Amount of Proposal: $4,500,000

2020-2024 NSF
EFRI: Plastics Recycling Processes by Integrating Mechanocatalytic Depolymerization, Monomer Purification, and Consumer Behavior
Carsten Sievers, Sankar Nair, Fani Boukouvala, Christopher W. Jones, Omar Asencio
$2,000,000

2020-2021 ARPA-E
Positive Power with Negative Emissions: Flexible NGCC Enabled by Modular Direct Air Capture
Matthew J. Realff, Fani Boukouvala, Joseph Scott, Ryan P. Lively, Christopher W. Jones
$1,009,210

2020-2022 Zero Carbon Partners
Subambient CO2 Sorption from Air
Christopher W. Jones
$823,000

2020-2022 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 14
Christopher W. Jones
$320,000

2020-2021 W. L. Gore
Characterizing Material Performance in Ultra-dilute CO_2 Separation
Christopher W. Jones
$116,186
$26,750

2019-2020 Zero Carbon Partners
Seeking Unconventional Materials for Carbon Capture from Air
Christopher W. Jones
$185,000

2019-2022 DOE – BES
Multi Compartment Nanoreactors as Supports for Incompatible Molecular Catalysts.
Christopher W. Jones, Seung Soon Jang, Marcus Weck
$1,650,000

2019-2020 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 13
Christopher W. Jones
$155,000

2019-2021 DOE-NETL
Design of Transition-Metal/Zeolite Catalysts for Direct Conversion of Coal-derived CO_2 to Aromatics
Christopher W. Jones, Andrew J. Medford
$800,000

2018-2021 DOE-EERE
Direct Air Capture of CO_2 and Delivery to Photobioreactors for Algal Biofuel Production
Christopher W. Jones, Valerie Thomas, + Global Thermostat, NREL, Algenol
$1,983,542

2018-2019 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 12
Christopher W. Jones
$150,000

2018-2022 DOE-BES
Center for Understanding and Control of Acid Gas-induced Evolution of Materials for Energy (UNCAGE-ME)
Krista Walton, Christopher W. Jones, David Sholl, Sankar Nair, and many others
$12,800,000 ($800,000 for Jones lab)

2017-2018 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 11
Christopher W. Jones
$150,000

2017-2020 The Dow Chemical Company
Anti-Coking Materials and Coatings for Steam Crackers
Christopher W. Jones, Pradeep K. Agrawal, Robert J. Davis (UVA)
$970,000 (Jones' amount: $550,953)

2016-2019 DOE-BES
Multi Compartment Nanoreactors as Supports for Incompatible Molecular Catalysts
Christopher W. Jones, Seung Soon Jang and Marcus Weck (NYU)
$1,440,000 (Jones' share $582,000; $585,000 subcontract to Weck at NYU)

2016-2017 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 10
Christopher W. Jones
$150,000

2015-2018 National Science Foundation
DMREF: Accelerating the Discovery and Development of Nanoporous 2D Materials and Membranes for Advanced Separations
Sankar Nair, David Sholl, Surya Kaladindi, Christopher W. Jones
$998,543 ($249,636)

2015-2016 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 9
Christopher W. Jones
$170,000

2014 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 8
Christopher W. Jones
$170,000

2014-2018 DOE-BES
Center for Understanding and Control of Acid Gas-induced Evolution of Materials for Energy (UNCAGE-ME)
Krista Walton, Christopher W. Jones, David Sholl, Sankar Nair, and many others
$11,200,000 ($800,000 for Jones lab)

2014-2015 Name Withheld
Homogeneous Catalysis
Christopher W. Jones, Pamela Pollet, Joseph Sadighi, Jake Soper
$193,000

2014-2015 Office of Naval Research
Fundamental Assessment of Supported Amine Adsorbents for CO_2 Extraction from Ambient Air
Christopher W. Jones
$145,000

2014 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 8
Christopher W. Jones
$170,000

2014-2018 DOE-BES
Catalysis Center for Energy Innovation – University of Delaware
Christopher W. Jones
$370,000

2014-2017 National Science Foundation
Design Characterizing Interactions of Carbon Dioxide with Tailored Adsorbing Materials for Capture of Carbon Dioxide from Power Plant Exhaust Gas and Ambient Air
Christopher W. Jones, Carsten Sievers, Israel Wachs (separate funds for Sophia Hayes)
$300,000

2013-2014 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 7
Christopher W. Jones
$75,000

2014-2016 National Science Foundation
SusChEM: A Novel Route to an Important Monomer, 2,5 Furandicarboxylic Acid, using Carbon Dioxide Captured from Air
Matthew Realff, Christopher W. Jones, Andreas Bommarius
$913,884

2013-2014 DOE-BES
Catalysis Center for Energy Innovation – University of Delaware
Christopher W. Jones
$43,000

2013-2014 Office of Naval Research
Fundamental Characterization of Isosteric Heats of Adsorption of Amine Adsorbents under Ultra-Dilute Conditions
Christopher W. Jones
$145,000

2013 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 6.
Christopher W. Jones
$130,000

2013-2016 The Dow Chemical Company
Anti-Coking Materials for Steam Crackers
Christopher W. Jones, Pradeep K. Agrawal, David S. Sholl, Robert J. Davis (UVA)
$1,200,000 (Jones' amount: $480,000)

2012-2015 Corning Incorporated
Structured Contactors for Gas Separations
Christopher W. Jones
$347,849

2012-2015 Phillips 66
Advanced Materials and Membranes for C_3 and C_4 Hydrocarbon Mixture Separations
Sankar Nair, Christopher W. Jones, David S. Sholl
$900,000 (Jones' amount: $300,000)

2012-2017 NSF
CCI: Center for Selective C-H Functionalization.
Huw Davies (Emory Catalysis Center - Jones is a funded investigator)
$617,250 (Jones' amount; total grant value not considered in fund-raising summary)

2012-2015 DOE-BES
Immobilized Molecular Catalysts: Cooperative Catalysis to Cascade Reactions.
Christopher W. Jones, C. Davis Sherrill, Seung Soon Jang, Marcus Weck (NYU)
$2,100,000 (Jones' share $721,102; $702,236 subcontract to Weck at NYU)

2012-2017 The Dow Chemical Company
Coatings for Indoor Air Quality.
Andreas S. Bommarius, Christopher W. Jones
$1,764,649 (Jones portion: $550,000)

2011-2016 The Dow Chemical Company
Reactive Separations – Membrane Reactors.
Sankar Nair, Christopher W. Jones, David S. Sholl
$2,000,000 (Jones portion: $1,000,000)

2011-2014 DOE-NETL, GE Energy, Algenol Biofuels, Southern Company
Rapid Temperature-Swing Adsorption using Polymeric/Supported Amine Hollow Fiber Materials.
Christopher W. Jones, William J. Koros, Matthew Realff, Yoshiaki Kawajiri, David Sholl
$3,023,680 (Jones portion: $2,069,027)

2011-2012 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 5.
Christopher W. Jones
$120,000

2011 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 4.
Christopher W. Jones
$32,500

2010-2011 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air – Part 3.
Christopher W. Jones
$60,000

2010-2011 DOE-NETL
Molecular Design and Mechanistic Understanding of Amine-Functionalized CO_2 Adsorbents – Part 6.
Christopher W. Jones,
$70,000

2010-2012 The Dow Chemical Company
Ethanol, Propanol and other Higher Alcohol Synthesis from H_2/CO - Part 2.
Christopher W. Jones, Pradeep K. Agrawal
$78,000

2010-2012 ARPA-E
High Performance MOF/Polymer Composite Membranes for Carbon Dioxide Capture from Flue Gas.
David Sholl, Sankar Nair, William J. Koros, Krista Walton, J. Carson Meredith, Christopher W. Jones,
$1,000,000 (no funds for Jones laboratory, Jones plays co-PI, advisory role)

2009-2012 Algenol Biofuels – DOE
Gas Separation and Delivery for Integrated Pilot Scale Biorefinery Operations for Producing Ethanol from Algae.
Christopher W. Jones, William J. Koros, Sankar Nair
$1,140,050 (GT portion, $822,512; Jones portion: $334,626)

2009-2012 DOE-NETL
High-Performance Sorbents for Carbon Dioxide Capture from Air.
David S. Sholl and Christopher W. Jones
$299,832 (Jones share $149,916)

2009-2011 Algenol Biofuels
Delivery of CO_2 for the Enhancement of Photosynthesis in Algae-based Biofuel Production.
Christopher W. Jones, William J. Koros, Sankar Nair
$122,554 (no funds for Jones laboratory, Jones plays co-PI, advisory role)

2009-2012 DOE-BES
Immobilized Molecular Catalysts: From Basic Design Principles to Cascade Reactions.
Christopher W. Jones, Marcus Weck (NYU), Peter Ludovice, David Sherrill, Robert Davis (UVA)
$2,100,000 (Jones' share $690,000; $285,000 subcontract to Davis at UVA; $610,000 subcontract to Weck at NYU)

2009-2010 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air, Part 2.
Christopher W. Jones
$130,000

2009-2010 ExxonMobil
New Solid Sorption Systems for CO_2 Capture Based on Functionalized Materials.
Christopher W. Jones
$30,000

2009 DOE-NETL
Molecular Design and Mechanistic Understanding of Amine-Functionalized CO_2 Adsorbents – Part 5"
Christopher W. Jones,
$35,000

2008-2009 Global Thermostat, LLC
Design of Sorbent Systems for CO_2 Capture from Ambient Air.
Christopher W. Jones
$63,500

2008-2010 Dreyfus Foundation
Composite Aminosilica Adsorbants: A New Paradigm for CO_2 Capture from Flue Gas.
Christopher W. Jones, William J. Koros
$120,000

2008-2009 Chevron
Lignin Depolymerization, Characterization, and Conversion into Liquid Fuels.
Christopher W. Jones, Arthur J. Ragauskas, Pradeep K. Agrawal
$195,000 (Jones part $97,500)

2008-2012 Conoco-Phillips
Membranes Containing Amine-Functionalized Mesoporous Silica Materials for CO_2 and H_2S Separations.
Sankar Nair, Christopher W. Jones, William J. Koros, W. Curtis Conner (UMass)
$935,295 (Jones part $377,864; $212,324 subcontract to Conner at UMass)

2008-2012 Conoco-Phillips
Advanced Materials and Membranes for CO_2 and H_2S Capture.
Sankar Nair, Christopher W. Jones, David S. Sholl, Peter J. Hesketh
$1,058,133 (Jones part $242,341)

2008-2012 The Dow Chemical Company
Cooperative Catalysis for Epoxide Ring-Opening Reactions – Enhancing Reactivity by Catalyst Design.
Christopher W. Jones
$450,000

2008-2012 The Dow Chemical Company
Ethanol, Propanol and other Higher Alcohol Synthesis from H_2/CO, A Combined Experimental and Computational Approach.
Christopher W. Jones, David S. Sholl, Pradeep K. Agrawal, Robert J. Davis
$1,184,000 (Jones part $580,419; $305,000 subcontract to Davis at UVA)

2008-2009 Institute of Paper Science and Technology
Technical and Economic Assessment of Syngas Generation from Woody Biomass (via CO_2 Separation/Capture).
Christopher W. Jones, Sankar Nair, Jim Frederick
$100,000 (Jones part $70,923)

2008-2010 ACS-PRF
Catalytic Coupling Moving Beyond Palladium – Exploring Heterogeneous Cu and Au Catalysts in Aromatic C-N and C-O Bond Forming Reactions"
Christopher W. Jones
$100,000

2008 DOE-NETL
Molecular Design and Mechanistic Understanding of Amine-Functionalized CO_2 Adsorbents – Part 4"
Christopher W. Jones,
$35,000

2007-2008 DOE-NETL
Molecular Design and Mechanistic Understanding of Amine-Functionalized CO_2 Adsorbents – Part 3"
Christopher W. Jones,
$35,000

2008 Micromeritics
Autochem II 2920 – Catalysis Research Tool for GT.
Christopher W. Jones,
$60,000

2007 DOE-NETL
Molecular Design and Mechanistic Understanding of Amine-Functionalized CO_2 Adsorbents – Part 2"
Christopher W. Jones,
$16,730

2007-2008 Chevron
Catalytic Conversion of Woody Biomass to Fuels – Part 2.
Christopher W. Jones, Pradeep K. Agrawal,
$68,602

2007-2008 GT-SEI
Second Generation Biodiesel by Catalytic Decarboxylation.
John Pierson, Christopher W. Jones, Tom Fuller
$33,333

2007-2009 Chevron
Zeolitic Upgrading of Biomass-Derived Compounds.
Christopher W. Jones,
$525,000

2007-2010 Chevron
Catalytic Conversion of Woody Biomass to Fuels.
Christopher W. Jones, Pradeep K. Agrawal, Art Ragauskas
$877,972 (Jones Part: $734,991)

2006-2009 NSF
Functionalized Magnetic Nanoparticles as Polymerization Catalysts.
Christopher W. Jones and Z. John Zhang
$285,000 (Jones Part: $165,000)

2006-2009 DOE-BES
Developing the Science of Immobilized Molecular Catalysts.
Christopher W. Jones, Marcus Weck, Peter Ludovice, David Sherrill, Robert Davis (UVA)
$2,080,000 (Jones' share $799,692; $270,000 subcontract to Davis at UVA)

2006-2007 CCACTI
Monomers and Chemicals from Post-Consumer Carpet.
John Muzzy, Matthew Realff, Fred Cook and Christopher W. Jones
$142,000 (Jones Part: $9000)

2006 DOE-NETL
Molecular Design and Mechanistic Understanding of Amine-Functionalized CO_2 Adsorbents.
Christopher W. Jones, Eric J. Beckman (U. Pitt), McMahon Gray (NETL)
$100,000 (Jones Part: $50,000)

2006-2010 ExxonMobil
Development of High Efficiency Membranes & Sorbents Based on Polymer-Inorganic/Carbon Materials.
William. J. Koros, Christopher W. Jones, Sankar Nair, Victor Breedveld, J. Carson Meredith
$1,433,224 (Jones Part: $258,170)

2005-2008 NSF
Living Radical Polymerization in Inverse Miniemulsions.
F. Joseph Schork and Christopher W. Jones
$234,185

2005-2006 Lonza
Immobilized Co(Salen) Complexes in the Hydrolytic Kinetic Resolution of rac-Epichlorohydrin.
Christopher W. Jones and Marcus Weck
$49,960

2005-2006 CCACTI
Monomers and Chemicals from Post-Consumer Carpet.
John Muzzy, Matthew Realff, Fred Cook and Christopher W. Jones
$167,000 (Jones Part: $9000)

2005-2008 DuPont
α-Methylene Lactones as Novel Multi-Functional Monomers for Tailored Polymeric Materials.
Christopher W. Jones
$75,000

2004-2007 P&G Foundation
Chemical Product Design, Optimization, and Engineering.
Christopher W. Jones, J. Carson Meredith and Matthew J. Realff
$150,000

2003-2004 IPST
Development of a 2-Stage Process for Hydrogen Production from Pine Sawdust.
Pradeep Agrawal and Christopher W. Jones
$50,000

2003-2006 DOE-BES
Basic Principles that Govern the Interaction of Organometallic Catalysts with Supports – the Science of Immobilized Molecular Catalysts."
Christopher W. Jones, Marcus Weck, Peter J. Ludovice, C. David Sherrill, Robert J. Davis (UVA)
$1,873,000 (Jones Part: $596,116)

2002-2005 NSF
Living Free Radical Polymerizations in Continuous Miniemulsion Reactors.
F. Joseph Schork, Christopher W. Jones
$360,000

2002-2003 NSF
Nanoscale Exploratory Research (NER): Molecular Design of Magnetic Nanocatalysts.
Christopher W. Jones, Z. John Zhang
$98,950 (Jones Part: $49,425)

2002-2007 NSF
CAREER: Rational Design in Chemical Engineering, From Polymerization Catalysis to Product Engineering.
Christopher W. Jones
$375,000

2001-2005 Shell Oil Company Foundation
Faculty Career Initiation Award.
Christopher W. Jones
$55,000

2001 Georgia Tech Polymer Education Research Center
Structure-Property Relationships in Novel Solid Polymerization Catalysts."
Christopher W. Jones
$7000

2001 Georgia Tech Polymer Education Research Center
Catalytic Polymerization in Miniemulsions
Christopher W. Jones, F. Joseph Schork
$7000

2001 PQ Corporation
Supported Iron Olefin Polymerization Catalysts.
Christopher W. Jones
$5,000

2001-2002 Oak Ridge Associated Universities
Rational Design of Solid Polymerization Catalysts Based on Core-Shell Magnetic Nanoparticles.
Christopher W. Jones
$10,000

2001-2003 ACS-PRF
Single-Site Olefin Polymerization Catalysts via the Molecular Design of Porous Silica.
Christopher W. Jones
$25,000

THESES SUPERVISED

M.S. Theses

1. Benn C. Wilson (ChBE)
Silica-supported Organic Catalysts for the Synthesis of Biodegradable Polymers.
2004

2. Mariefel B. Valenzuela-Olarte (PSE) w/ P. K. Agrawal
Batch Aqueous Phase Reforming of Lignocellulosic Biomass for Hydrogen Production.
2006

3. Travis J. C. Hoskins (ChBE) w/ P. K. Agrawal
Carbon-Carbon Bond Forming Reactions of Biomass Derived Aldehydes.
2008

4. Ratayakorn Khunsupat, (Chem)
Poly(allyl amine) and Derivatives for CO_2 Capture from Flue Gas or Ultra-dilute Gas Streams such as Ambient Air.
2011

5. Hiroko Okatsu, (ChBE) w/P. K. Agrawal
New Synthetic Methods to Alter Catalytic Properties of Supported K/MoS_2 Catalysts for Syngas Conversion to Higher Alcohols.
2012

6. Grace Chen, (ChBE) w/W. Koros
Fiber Adsorbents for t-Butyl Mercaptan Removal from Pipeline Grade Natural Gas.
2013

7. Xiaojuan (Roxy) Zhou, (ChBE) w/P. Agrawal
   Selective Hydrogenation of Lignin-Derived Model Compounds to Produce Nylon 6 Precursors.
   2013

8. Mustafa Al-Khabbaz, (ChBE)
   Guanidinylated Poly(Allylamine) Supported on Mesoporous Silica For CO_2 Capture From Flue Gas.
   2014

9. Sen Yang (ChBE)
   Structure Sensitivity of Palladium Nanocrystal Catalysts in Hydrogenation of Biomass-Derived Furanic Compounds
   2015

10. Chunjae Yoo (PSE)
    Direct CO_2 Capture from Ambient Air with Amine Functionalized Silica and Cellulose Materials
    2015

11. Taylor Hatridge (ChBE)
    Utilizing Packed Bed Reactors for the Employment of C–H Functionalization in Continuous Processing
    2021

Ph.D. Theses

1. Michael McKittrick, (ChBE)
   Single-Site Polymerization Catalysts via the Molecular Design of Porous Silica.
   2005
   Current Position: US Department of Energy

2. Joseph Nguyen, (ChBE)
   Design, Synthesis and Optimization of Recoverable and Recyclable Silica-Immobilized Atom Transfer Radical Polymerization Catalysts.
   2005
   Current Position: Chevron

3. James Russum, (ChBE) w/ F. J. Schork
   Controlled Radical Polymerizations in Miniemulsions: Advances in the Use of RAFT.
   2005
   Current Position: MSL Oilfield Services

4. Jason Hicks, (ChBE)
   Organic/Inorganic Hybrid Amine and Sulfonic Acid Tethered Silica Materials: Synthesis, Characterization and Applications.
   2007
   Current Position: University of Notre Dame

5. John Richardson, (ChBE)
   Distinguishing Between Surface & Solution Catalysis for Palladium Catalyzed C-C Coupling Reactions: Use of Selective Poisons.
   2008
   Current Position: Arkema

6. Rebecca (Shiels) Hicks, (ChBE)
   Synthesis, Characterization, and Evaluation of Silica and Polymer Supported Catalysts for the Production of Fine Chemicals.
   2008
   Current Position: University of Notre Dame

7. Genggeng Qi, (ChBE) w/ F. J. Schork
   Uncoventional Miniemulsion Polymerization.
   2008
   Current Position: Xerox

8. Christopher Gill, (ChBE)
   Novel Hybrid Organic/Inorganic, Single-Sited Catalysts and Supports for Fine Chemical Intermediate Synthesis.
   2009
   Current Position: Shell

9. Tae-Hyun Bae, (ChBE) w/ S. Nair
   Engineering Nanoporous Materials for Applications in Gas Separation Membranes.
   2010
   Current Position: KAIST (South Korea)

10. Jeffrey Drese, (ChBE)
    The Design, Synthesis and Characterization of Aminosilica Adsorbents for CO_2 Capture from Dilute Sources.
    2010
    Current Position: Phillips 66

11. Mariefel Valenzuela Olarte, (ChBE) w/ P. K. Agrawal
    Base-Catalyzed Depolymeization of Lignin and Hydrodeoxygenation of Lignin Model Compounds.
    2011
    Current Position: Pacific Northwest National Laboratory

12. Eric Ping, (ChBE) w/ T. F. Fuller
    Silica Supported Palladium Nanoparticles for the Decarboxylation of High-Acid Feedstocks: Design, Deactivation and Regeneration.
    2011
    Current Position: Global Thermostat, LLC

13. Dun-Yen Kang, (ChBE) w/ S. Nair
    Single-walled Metal oxide Nanotubes and Nanotube Membranes for Molecular Separations.
    2012
    Current Position: National Taiwan University

14. Wei Long, (Chem)
    Designing Immobilized Catalysts for Chemical Transformations: New Platforms to Tune the Accessibility of Active Sites.
    2012
    Current Position: INX International

15. Joshua Thompson, w/ S. Nair
    Evaluation and Application of New Nanoporous Materials for Acid Gas Separations.
    2013
    Current Position: Oak Ridge National Laboratory

16. Megan Lydon, (Chem) w/ S. Nair
    Properties of Inorganic Surface-Modified Zeolites and Zeolite/Polyimide Nanocomposite Membranes.
    2013
    Current Position: Global Foundaries

17. Michael Morrill, w/P. Agrawal
    Higher Alcohol Synthesis on Magnesium/Aluminum Mized oxide Support Potassium Carbonate Promoted Molybdenum Sulfide.
    2013
    Current Position: Phillips 66

18. Hyung Ju Kim, w/ S. Nair
    Modified Mesoporous Silica Membranes for Separation Applications
    2013
    Current Position: KAERI (South Korea)

19. Weiyin Xu, w/P. Agrawal
    Catalytic Routes from Lignin to Useful Products
    2013
    Current Position: Pfizer

20. Praveen Bollini
    Amine-Oxide Adsorbents for Post-Combustion CO_2 Capture
    2013
    Current Position: University of Houston

21. Stephanie Didas
    Structural Properties of Aminosilica Materials for CO_2 Capture
    2014
    Current Position: Lawrence Berkeley National Laboratory

22. Linda Al-Hmoud
Supported Copper Catalysts in Organic Transformations
2014
Current Position: University of Jordan

23. Miles Sakwa-Novak
Supported Poly(ethyleneimine) Adsorbents for CO_2 Removal from Air
2015
Current Position: Global Thermostat, LLC

24. Seung Won Choi, w/S. Nair, D. S. Sholl
Experimental and Modeling Investigation of Membrane Reactor Systems for Propane Dehydrogenation
2016
Current Position: LG Chemical

25. Micaela Taborga Claure, w/ P. K. Agrawal
Insight into Structure-Reactivity Relationships and Reaction Pathways for Higher Alcohol Synthesis from Syngas over Potassium Promoted Molybdenum Sulfide Supported Catalysts
2016
Current Position: ExxonMobil

26. Kiwon Eum, w/S. Nair
Mixed-Linker ZIF Materials and ZIF/Polymer Hollow Fiber Membranes for Hydrocarbon Separations
2016
Current Position: Soongsil University (South Korea)

27. Shilpa Mahamulkar, w/Agrawal
α-Alumina Supported Ceria Catalysts for Oxidation and Gasification of Radical Coke
2017
Current Position: Intel

28. Grace Chen, w/Koros
Hollow Fiber Sorbents for Odorent Removal from Pipeline Natural Gas
2017
Current Position: Savannah River National Laboratory

29. Taylor Sulmonetti, w/Agrawal
Reduced Mixed Metal Oxides for the Hydrogenation, Hydrogenolysis and Ring-Opening of Furanics
2017
Current Position: Exponent

30. Caroline Hoyt (Chem)
Design of Polymer Architectures for Catalysis
2017
Current Position: National Renewable Energy Laboratory

31. Lalit Darunte, w/Sholl, Walton
Application of Metal Organic Frameworks (MOFs) To Capturing CO_2 Directly from Air
2018
Current Position: Dow Chemical

32. Chun-Jae Yoo
Immobilization of Organosilanes on Support Materials and their Applications in CO_2 Capture and Heterogeneous C-H Functionalization Catalysis.
2019
Current Position: KIST (South Korea)

33. Nathan Ellebracht
Engineered Cellulose Nanomaterials Systems for Biomass Upgrading Catalysis
2019
Current Position: Lawrence Livermore National Laboratory

34. Jason Lee, w/Sievers
Spectroscopic Characterization of Amine Sorbents for CO_2 Capture
2019
Current Position: Inspire Brands

35. Claudia Okonkwo
Hydrogen Sulfide Capture Using Amine Modified Mesoporous Oxides
2020
Current Position: Boston Consulting

36. Qandeel Almas, w/Sievers
Elucidation of Deactivation Mechanisms of Zeolites used in Petroleum and Biomass Upgrading Processes
2020
Current Position: University of Science and Technology (Pakistan)

37. Byunghyun Min, w/Nair
MFI Zeolite Membranes on Ceramic Hollow Fibers: Scalable Fabrication Processes and Hydrocarbon Separation Properties
2020
Current Position: Phillips 66

38. Akshay Korde, w/Nair
Synthesis and Applications of Two-Dimensional Zeolites to Catalysis and Membrane Separations
2020
Current Position: Abbvie

39. Maxim Bukhovko, w/Agrawal
Anticoking Materials and Surfaces for Hydrocarbon Steam Crackers
2021
Current Position: Northrup Grumman

Post-Doctoral Researchers and Research Scientists Advised

1. Kunquan Yu, Ph.D. Brown University (Chem)
   2002-2004
   Current Position: Shell

2. Wilfred Smulders, w/ F. J. Schork, Ph.D. Eindhoven University (Chem)
   2003-2004
   Current Position: BASF

3. Nam Phan, Ph.D. University of Nottingham (Chem)
   2002-2004
   Current Position: Ho Chih Minh National University (Vietnam)

4. Xiaolai Zheng, w/ M. Weck, Ph.D. Aachen University (Chem)
   2004-2007
   Current Position: BASF Catalysts

5. Chil-Hung (Henry) Cheng, w/ S. Nair, then P. K. Agrawal, Ph.D. Texas A&M (ChBE)
   2006-2008
   Current Position: Ryerson University (Canada)

6. Teresita Marzialetti, w/ P. K. Agrawal, Ph.D. Universidad de Concepción (Chem)
   2006-2009
   Current Position: University of Concepción (Chile)

7. Carsten Sievers, w/ P. K. Agrawal, Ph.D. Technische Universität München (Tech. Chem)
   2007-2008
   Current Position: Georgia Tech

8. Krishnan Venkatasubbaiah, Ph.D. IIT Kanpur (Chem)
   2007-2011
   Current Position: NISER (India)

9. Do-Young Hong, w/ P. K. Agrawal, Ph.D. Hanyang University (ChE)
   2007-2010
   Current Position: KRICT (S. Korea)

10. Sunho Choi, Ph.D. Minnesota (MSE)
    2008-2011
    Current Position: Microporous

11. Jun Huang, w/ P. K. Agrawal, Ph.D. Stuttgart (Chem)
    2008-2009
    Current Position: University of Sydney (Australia)

12. Xunjin Zhu, Ph.D. Hong Kong Baptist University (Chem)
    2008-2010
    Current Position: Hong Kong Baptist University (China)

13. Nguyen Tien Thao, w/ P. K. Agrawal, Ph.D. Laval University (ChE)
    2008-2010
    Current Position: Vietnam National University, Hanoi

14. Wen Li, Ph.D. Texas (MSE)
    2009-2010
    Current Position: Google

15. Watcharop Chaikittisilp, Ph.D. University of Tokyo (Chem. Sys. Engin.)
    2010-2011
    Current Position: NIMS (Japan)

16. Yasutaka Kuwahara, Ph.D. Osaka University (MSE)
    2011
    Current Position: Osaka University

17. Sarah Russell, Ph.D. Cornell University (Chem)
    2011-2012

18. Nachal Subramanian, Ph. D. Louisiana State University (ChBE)
    2012-2013
    Current Position: Surface Measurement Systems

19. Nicholas Brunelli, Ph.D. California Institute of Technology (ChBE)
    2010-2013
    Current Position: Ohio State University

20. Akihiro Nomura, Ph.D. University of Kyoto (Chem)
    2012-2014
    Current Position: NIMS (Japan)

21. Yan Feng, Ph.D. University of Minnesota (Chem)
    2011-2014.
    Current Position: Fannie Mae

22. Fateme Rezaei, w/M. J. Realff and Y. Kawajiri, Ph.D. Monash University and Lulea University of Technology (ChBE)
    2011-2014
    Current Position: Missouri University of Science and Technology

23. Yanfang Fan, w/W. J. Koros, Ph.D. University of Connecticut (ChBE)
    2012-2014
    Current Position: China University of Petroleum

24. Eloy Sanz, Ph.D. Rey Juan Carlos University (ChBE)
    2014
    Current Position: Rey Juan Carlos University (Spain)

25. Sumit Bali, Ph.D IIT Kanpur (Chem)
2012-2015
Current Position: Energizer

26. Adam Holewinski, Ph.D. University of Michigan (ChBE)
2014-2015
Current Position: University of Colorado

27. Christopher Murdock, w/K. S. Walton, Ph.D. University of Tennessee (Chem)
2014-2015
Current Position: Conexlink

28. Shuai Tan, Ph.D. University of South Carolina (ChBE)
2013-2016
Current Position: Honeywell

29. Eric Moschetta, Ph.D. Penn State University (ChBE)
2013-2016
Current Position: Abbvie

30. Matthew Potter, Ph.D. University of Southampton (Chem)
2015-2016
Current Position: University of Southampton

31. Li-Chen Lee, Ph.D. Iowa State University (Chem)
2014-2016

32. Bo Hu, Ph.D. University of Illinois, Chicago (Chem)
2015-2017
Current Position: Phillips 66

32. Sheng-Chiang (Stanley) Yang, Ph.D National Taiwan University (Chem)
2016-2017
Current Position: Lunghwa University of Science and Technology (Taiwan)

33. Hung Vu Tran, Ph.D. University of Houston (Chem)
2017
Current Position: University of Houston

34. Hyuk Taek Kwon, Ph.D. Texas A&M University (ChBE)
2016-2018
Current Position: University of Southampton

35. Simon Pang, Ph.D. University of Colorado (ChBE)
2014-2018
Current Position: Lawrence Livermore National Laboratory

36. Michele Sarazen, Ph.D. University of California, Berkeley (ChBE)
2016-2018
Current Position: Princeton University

37. Achintya Sujan, Ph.D. Auburn University (ChBE)
    2017-2019
    Current Position: Purisys

38. Kristina Golub, Ph.D. Texas A&M University (ChBE)
    2017-2019
    Current Position: Phillips 66

39. Jason Lee, Ph.D. Georgia Tech (ChBE)
    2019-2020
    Current Position: Inspire Brands

40. Dharam Kumar, Ph.D. University of Manchester (Chem)
    2018-2020
    Current Position: Extractmer

41. Dong-Kyu Moon, Ph.D. Yonsei University (ChBE)
    2019-2021

Visiting Research Students or Researchers Advised

1. Cornelia Ablasser, Chemical Engineering, Technische Universität München
   2008

2. Sabine Pilsl, Chemical Engineering, Technische Universität München
   2008-2009

3. Elizabeth Kays, Chemistry, Oxford University
   2009

4. Michael Batrick, Chemical Engineering, Kansas State University
   2010.

5. Tobias Berto, Chemistry, Technische Universität München, Diploma Thesis
   2011.

6. Dr. Lan Chen, Chemistry, University College, Cork, Ireland
   2011

7. Fengshou Wu, Chemistry, Wuhan University, China
   2013

8. Dr. Laura Briones Gil, Chemical & Environmental Engineering, Rey Juan Carlos University, Mostoles, Spain
   2013

9. Lindsay Ohlin, Lulea University, Sweden
   2014

10. Jake Greenfield, Chemistry, Imperial College, London, UK
    2014

11. Jeroen Lauerent, Chemical Engineering, University of Gent, Belgium
    2014

12. Tran Duy Thach, Chemistry, Tokyo Institute of Technology, Japan, 2015

13. Kyeong Min Cho, Chemical Engineering, KAIST, Korea, 2015-2016

14. Yuki Takada, Chemistry, Nagoya University, Japan, 2015-2016

15. Hyojeong (Annie) Lee, U. Rochester, 2016

16. Luiz Henrique Vieira, Universidade Estadual Paulista, Brazil, 2017-2018

17. Anton de Vylder, Chemical Engineering, University of Gent, Belgium, 2018-2019

18. Chenglong Hou, Energy Engineering, Zhejiang University, China, 2018–2019

19. Sasithorn Kuhaudomlap, Chemical Engineering, Chulalongkron University, Thailand, 2019-2020

20. Wei Zhou, Xiamen University, Chemistry and Chemical Engineering, China, 2019-2020

PUBLICATIONS

Published Books or Parts of Books

Books Edited:

1. *Nanostructured Catalysts*, S. L. Scott, C. M. Crudden and C. W. Jones Eds., Kluwer: New York, 2003.

Book Chapters Authored:

4. "A Convergence of Homogeneous and Heterogeneous Catalysis – Immobilized Organometallic Catalysts," R. A. Shiels and C. W. Jones, in *Model Systems in Catalysis; From Single Crystals and Size-Selected Clusters to Supported Enzyme Mimics*, R. M. Rioux, Ed., Kluwer, New York, 2008.

3. "Tethered Catalysts on Inorganic Oxides," J. C. Hicks and C. W. Jones, in *Immobilizing α-Olefin Polymerization Catalysts*, J. Severn, Ed., Wiley-VCH: Weinhein, Germany, 2007.

2. “Stability of Supported Pincer Complex-Based Catalysts in Heck Catalysis” W. J. Sommer, C. W. Jones and M. Weck in *The Chemistry of Pincer Compounds*, D. Morales-Morales and C. M. Jensen Eds., Elsevier: Amsterdam, the Netherlands, 2007.

1. “Strategies for the Control of Porosity Around Organic Active Sites in Inorganic Matrices” C. W. Jones in *Nanostructured Catalysts*, S. L. Scott, C. M. Crudden and C. W. Jones Eds., Kluwer: New York, 2003.

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21084 total citations based on ISI Web of Science. February 28, 2021
[26875 total citations based on Google Scholar. February 28, 2021]

(20240 from Georgia Tech work; 844 from graduate work)

ISI H Index = 75 (paper citations in red contribute to H-index).
Google Scholar H-Index = 82;
https://scholar.google.com/citations?user=ltWKpYgAAAAJ&hl=en&oi=ao

323. “Single-Walled Zeolitic Nanotubes.” A. Korde, B. Min, E. Kapaca, O. Knio, Z. Wang, J. Leisen, X. Yin, X. Zhang, D. S. Sholl, X. Zou, T. Willhammar, C. W. Jones, S. Nair, *Science* **2021**, in revision.

322. “Chemical Kinetics of the Autooxidation of Poly(ethyleneimine) in CO_2 Sorbents.” I. Nezam, J. Xie, K. W. Golub, J. Carneiro, K. Olsen, E. W. Ping, C. W. Jones, M. A. Sakwa-Novak, *ACS Sustainable Chemistry and Engineering* **2021**, in revision.

321. “Integrated Capture and Conversion of CO_2 into Methane Using $NaNO_3$/MgO + Ru/Al_2O_3 as a Catalytic Sorbent.” S. J. Park, M. P. Bukhovko, C. W. Jones, *Chemical Engineering Journal* **2021**, in press.

320. “Enhanced Coke Gasification Activity of the $Mn_{1.5}Cr_{1.5}O_4$ Spinel Catalyst during Coking in Ethylene–Steam Mixtures.” A. Koutsianos, L. B. Hamdy, C.-J. Yoo, J. J. Lee, M. Taddei, J. M. Urban-Klaehn, J. Dryzek, C. W. Jones, A. R. Barron, E. Andreoli, *Journal of Materials Chemistry A* **2021**, 9, 10827-10837.

319. “Enhanced Coke Gasification Activity of $Mn_{1.5}Cr_{1.5}O_4$ Spinel Catalyst during Coking in Ethylene-Steam Mixture.” M P. Bukhovko, L. Yang, I. Nezam, L. Li, A. Malek, R. J. Davis, P. K. Agrawal, C. W. Jones, *Energy & Fuels* **2021**, 35, 5271–5280.

318. “Distribution and Transport of CO_2 in Hydrated Hyperbranched Poly(ethylenimine) Membranes: A Molecular Dynamics Simulation Approach.” K. I. Kim, R. Lawler, H. J. Moon, P. Narayanan, M. A. Sakwa-Novak, C. W. Jones, S. S. Jang, *ACS Omega* **2021**, 6, 3390-3398.

317. “Oxidative Dehydrogenation of Propane to Propylene with Soft Oxidants via Heterogeneous Catalysis.” X. Jiang, L. Sharma, V. Fung**,** S. J. Park, C. W. Jones, B. G. Sumpter, J. Baltrusaitis, Z. Wu, *ACS Catalysis* **2021**, 11, 2182-2234.

316. “Direct Aromatization of CO_2 via Combined CO_2 Hydrogenation and Zeolite-based Acid Catalysis.” I. Nezam, W. Zhou, G. S. Gusmão, M. J. Realff, Y. Wang, A. J. Medford, C. W. Jones, *Journal of CO_2 Utilization* **2021**, 45, 101405.

315. “Creation of Discrete Active Site Domains via Mesoporous Silica Poly(styrene) Composite Materials for Incompatible Acid-Base Cascade Reactions.” J. W. Cleveland, D. R. Kumar, J. Cho, S. S. Jang, C. W. Jones, *Catalysis Science Technology* **2021**, 11, 1311-1322.

314. “Porosity and Hydrophilicity Modulated Quaternary Ammonium-based Sorbents for CO_2 Capture.” C. Hou, D. R. Kumar, Y. Jin, Y. Wu, J. J. Lee, C. W. Jones, T. Wang, *Chemical Engineering Journal* **2021**, 127532.

313. “Conversion of Unprotected Aldose Sugars to Polyhydroxyalkyl and *C*-Glycosyl Furans via Zirconium Catalysis." N. Ronaghi, D. M. Fialho, C. W. Jones, S. France, *Journal of Organic Chemistry* **2020**, 85, 23, 15337–15346.

312. “Influence of Co on Ethylene Steam Reforming over Co-Cr-O Spinel Catalysts.” L. Yang, M. P. Bukhovko, A. Malek, L. Li, C. W. Jones, P. K. Agrawal, R. J. Davis, *Catalysis Letters* **2020**, doi.org/10.1007/s10562-020-03396-5

311. “Steam Reforming of Ethylene over Nickel based Spinel Oxides.” L. Yang, M. P. Bukhovko, A. Malek, L. Li, C. W. Jones, P. K. Agrawal, R. J. Davis, *Applied Catalysis A. General* **2020**, 603, 117739

310. “Separation of C_2-C_4 Hydrocarbons from Methane by Zeolite MFI Hollow Fiber Membranes Fabricated from 2D Nanosheets.” B. Min, A. Korde, S. Yang, Y. Kim, C. W. Jones, S. Nair, *AIChE Journal* **2020**, e17048.

309. “Single-step Scalable Fabrication of MFI Hollow Fiber Membranes for Hydrocarbon Separations.” B. Min, S. Yang, A. Korde, C. W. Jones, S. Nair, *Advanced Materials Interfaces* **2020**, 7, 2000926.

308. “AEL Zeolite Nanosheet-Poly(amide) Nanocomposite Membranes on α-Alumina Hollow Fibers with Enhanced Pervaporation Properties.” A. Korde, B. Min, A. Ganesan, S. Yang, A. Grosz, C. W. Jones, S. Nair, *Industrial Engineering Chemistry Research* **2020**, 59, 14789-14796.

307. “The Effect of Extended Aging & Oxidation on Linear Poly(propylenimine)-Mesoporous Silica Composites for CO_2 Capture from Simulated Air and Flue Gas Streams.” C. Rosu, S. Pang, A. Sujan, M. Sakwa-Novak, E. W. Ping, C. W. Jones, *ACS Applied Materials & Interfaces* **2020**, 12, 38085-38097.

306. "Using Nature's Blueprint to Enable Catalysis with Earth-Abundant Metals." R. M. Bullock, J. G. Chen, L. Gagliardi, Paul J. Chirik, O. K. Farha, C. H. Hendon, C. W. Jones, J. A. Keith, J. Klosin, S. D. Minteer, R. H. Morris, A. T. Radosevich, T. B. Rauchfuss, N. A. Strotman, A. Vojvodic, T. R. Ward, J. Y. Yang, Y. Surendranath *Science* **2020**, 369, eabc3183. 9 citations.

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302. "Effect of Humidity on the Sorption of H_2S from Multi-Component Acid Gas Streams on Silica-Supported Sterically Hindered and Unhindered Amines." C. N. Okonkwo, H. Fang, D. S. Sholl, J. E. Leisen, C. W. Jones, *ACS Sustainable Chemistry & Engineering* **2020**, 8, 10102–10114.

301. "Reversible Photoswitching in Poly(2-oxazoline) Nanoreactors." M. Kuepfert, P. Qu, A. Cohen, C. B. Hoyt, C. W. Jones, M. Weck, *Chemistry A European Journal* **2020**, 26, 11776-11781.

300. "Gasification of Radical Coke with Steam and Steam–Hydrogen Mixtures over Manganese–Chromium Oxides." M. P. Bukhovko, L. Yang, L. Li, A. Malek, R. J. Davis, P. K. Agrawal, C. W. Jones, *Industrial & Engineering Chemistry Research* **2020**, 59, 10813–10822. 1 citation.

299. "$NaNO_3$ Promoted Mesoporous MgO for High Capacity CO_2 Capture from Simulated Flue Gas with Isothermal Regeneration." S. J. Park, Y. Kim, C. W. Jones, *ChemSusChem* **2020**, 13, 2988-2995. 1 citation.

298. "Functionalized Cellulose Nanofibril Aerogels as Cooperative Acid–base Organocatalysts for Liquid Flow Reactions." N. C. Ellebracht, C. W. Jones, *Carbohydrate Polymers* **2020**, 233, 115825. 3 citations.

297. "Aminated Poly(ethylene glycol) Methacrylate Resins as Stable Heterogeneous Catalysts for the Aldol Reaction in Water." A. De Vylder, J. Lauwaert, J. De Clercq, P. Van Der Voort, C. W. Jones, J. W. Thybaut, *Journal of Catalysis* **2020**, 381, 540-546. 4 citations.

296. "Selective Removal of Hydrogen Sulfide from Simulated Biogas Streams using Sterically Hindered Amine Adsorbents." C. N. Okonkwo, J. J. Lee, A. De Vylder, Y. Chiang, J. W. Thybaut, C. W. Jones, *Chemical Engineering Journal* **2020**, 122349. 6 citations.

295. ”CO_2 Adsorption and Oxidative Degradation of Silica-supported Branched and Linear Aminosilanes." C.-J. Yoo, S.-J. Park, C.W. Jones, *Industrial & Engineering Chemistry Research* **2020**, 59, 7061-7071.

294. “Silica Supported Poly(propylene guanidine) as a CO_2 Sorbent in Simulated Flue Gas and Direct Air Capture.” S. J. Park, J. J. Lee, C. B. Hoyt, D. R. Kumar, C. W. Jones, *Adsorption* **2020**, 26, 89-101. 2 citations.

293. “Insights into Redox Dynamics of Vanadium Species Impregnated in Layered Siliceous Zeolitic Structures during Methanol Oxidation Reactions.” L. H. Vieira, L. G. Possato, T. F. Chaves, J. J. Lee, T. P. Sulmonetti, C. W. Jones, L. Martins, *ChemCatChem* **2020**, 12, 141-151. 1 citation.

292. “Poly(glycidyl amine)-Loaded SBA-15 Sorbents for CO_2 Capture from Dilute and Ultradilute Gas Mixtures.” A. R. Sujan, D. R. Kumar, M. A. Sakwa-Novak, E. W. Ping, B. Hu, S. J. Park, C. W. Jones, *ACS Applied Polymer Materials* **2019**, 1, 3137-3147. 4 citations.

291. “Transformations of FCC catalysts and Carbonaceous Deposits during Repeated Reaction-regeneration Cycles.” Q. Almas, M. A. Naeem, M. A. S. Baldanza, J. Solomon, J. C. Kenvin, C. R. Müller, V. Teixeira da Silva, C. W. Jones, C. Sievers, *Catalysis Science Technology* **2019**, 9, 6977-6992. 3 citations.

290. ”Steam Reforming of Ethylene over Manganese-chromium Spinel Oxides.” L. Yang, M. P. Bukhovko, G. Brezicki, A. Malek, L. Li, C. W. Jones, P. Agrawal, R. J. Davis, *Journal of Catalysis* **2019**, 380, 224-235. 4 citations.

289. “MOF-Derived Co/Cu-Carbon Nanoparticle Catalysts for Furfural Hydrogenation: Effect of Composition and Pyrolysis Conditions on Structure and Reactivity.” K. W. Golub, T. P. Sulmonetti, L. A. Darunte, M. Shealy, C. W. Jones, *ACS Applied Nano Materials* **2019**, 2, 6040-6056. 1 citation.

288. “Effect of Si/Al Ratio on the Catalytic Activity of Two-dimensional MFI Nanosheets in Aromatic Alkylation and Alcohol Etherification.” A. Korde, B. Min, Q. Almas, Y. Chiang, S. Nair, C. W. Jones, *ChemCatChem* **2019**, 11, 4548-4557. 1 citation.

287. “α-Alumina Supported Doped Ceria Catalysts for Steam Gasification and Oxidation of Radical Coke.” S. Mahamulkar, K. Yin, T. Sulmonetti, H. T. Kwon, R. J. Davis, L. Li, H. Shibata, A. Malek, C. W. Jones, P. K. Agrawal, *Chemical Engineering Research & Design* **2019**, 151, 1-9. 3 citations.

286. “Self-supported branched Poly(ethyleneimine) Materials for CO_2 Adsorption from Simulated Flue Gas.” C.-J. Yoo, P. Narayanan, C. W. Jones, *Journal of Materials Chemistry A* **2019**, 7, 19513-19521. 8 citations.

285. “Silica Supported Hindered Aminopolymers for CO_2 Capture.” J. J. Lee, C. Sievers, C. W. Jones, *Industrial & Engineering Chemistry Research* **2019**, 58, 22551-22560. 1 citation.

284. "Aminopolymer-Impregnated Hierarchical Silica Structures: Unexpected Equivalent CO_2 Uptake under Simulated Air Capture and Flue Gas Capture Conditions." H. T. Kwon, M. A. Sakwa-Novak, S. H. Pang, A. R. Sujan, E. W. Ping, C. W. Jones, *Chemistry of Materials* **2019**, 31, 5229-5337. 10 citations.

283. "CO_2 and SO_2 Interactions with Methylated Poly(ethyleneimine) functionalized Capacitive Micromachined Ultrasonic Transducers (CMUTs): Gas Sensing and Degradation Mechanism." D. Barauskas, S. J. Park, D. Pelenis, G. Vanagas, J. J. Lee, D. Viržonis, C. W. Jones, J. Baltrusaitis, *ACS Applied Electronic Materials* **2019**, 1, 1150-1161. 1 citation.

282. "Continuous Zeolite MFI Membranes Fabricated from 2D MFI Nanosheets on Ceramic Hollow Fibers." B. Min, S. Yang, A. Korde, Y. H. Kwon, C. W. Jones, S. Nair, *Angewandte Chemie International Edition*, **2019**, 58, 8201-8205. 17 citations.

281. "Effect of Different Acid Initiators on Branched Poly(propyleneimine) Synthesis and CO_2 Sorption Performance." M. L. Sarazen, M. A. Sakwa-Novak, E. W. Ping, C. W. Jones, *ACS Sustainable Chemistry & Engineering*, **2019**, 7, 7338-7345. 8 citations.

280. "Optimized Cellulose Nanocrystal Organocatalysts Outperform Silica-supported Analogues: Cooperativity, Selectivity, and Bifunctionality in Acid–Base Aldol Condensation Reactions." N. C. Ellebracht, C. W. Jones, *ACS Catalysis* **2019**, 9, 3266-3277. 8 citations.

279. "Exploring Steam Stability of Mesoporous Alumina Species for Improved Carbon Dioxide Sorbent Design." M. E. Potter, J. J. Lee, L. A. Darunte, C. W. Jones, *Journal of Materials Science* **2019**, 54, 7563-7575. 2 citations.

278. "Direct CO_2 Capture from Air Using Poly(ethyleneimine) Loaded Polymer/Silica Fiber Sorbents." A. R. Sujan, S. H. Pang, G. Zhu, C. W. Jones, R. P. Lively, *ACS Sustainable Chemistry & Engineering* **2019**, 7, 5264-5273. 15 citations.

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276. "In silico Prediction of Structural Properties of Racemic Porous Organic Cage Crystals." Y. Liu, G. Zhu, W. You, H. Tang, C. W. Jones, R. P. Lively, D. S. Sholl, *Journal of Physical Chemistry C* **2019**, 123, 3, 1720-1729. 4 citations.

275. "Molecularly-mixed Composite Membranes for Advanced Separation Processes." G. Zhu, F. Zhang, X. Hu, G. Zhang, C. W. Jones, R. P. Lively, *Angewandte Chemie International Edition* **2019**, 58, 2638-2643. 19 citations.

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273. “Role of Mesopore Generation Method in Structure, Activity and Stability of MFI Catalysts in Glycerol Acetylation.” Q. Almas, C. Sievers, C. W. Jones, *Applied Catalysis A. General* **2019**, 571, 107-111. 5 citations.

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270. “All-Nanoporous Hybrid Membranes: Redefining Upper Limits on Molecular Separation Properties.” F. Rashidi, J. Leisen, S.-J. Kim, A. A. Rownaghi, C. W. Jones, S. Nair, *Angewandte Chemie International Edition* **2019**, 131, 242-245. 16 citations.

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266. “Silica Supported Sterically Hindered Amines for CO_2 Capture.” J. J. Lee, C.-J. Yoo, C.-H. Chen, S. E. Hayes, C. Sievers, C. W. Jones, *Langmuir* **2018**, 34, 12279–12292. 15 citations.

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262. "Probing Metal-Organic Framework Design for Adsorptive Natural Gas Purification" J. Joshi, G. Zhu, J. Lee, E. Carter, C. W. Jones, R. P. Lively, K. S. Walton, *Langmuir* **2018**, 34, 8443-8450. 21 citations.

261. "Molecular Blends of Methylated-Poly(ethylenimine) and Amorphous Porous Organic Cages for SO_2 Adsorption." G. Zhu, J.-M. Y. Carrillo, A. Sujan, C. N. Okonkwo, S. Park, B. G. Sumpter, C. W. Jones, R. P. Lively, *Journal of Materials Chemistry A*. **2018**, 6, 22043-22052. 9 citations.

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