

Jeffrey R. Seay, Ph.D., P.E.

PJC College of Engineering Professor
Department of Chemical and Materials Engineering
University of Kentucky College of Engineering
Paducah Extended Campus Program

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Professional Preparation

Auburn University	Chemical Engineering	BS	1996
University of South Alabama	Chemical Engineering	MS	2004
Auburn University	Chemical Engineering	PhD	2008

Professional Appointments / Experience

University of Kentucky

Associate Professor	Department of Chemical and Materials Engineering	2014 – Present
Assistant Professor	Department of Chemical and Materials Engineering	2008 – 2014

Makerere University

Visiting Associate Professor	Dept. of Biosystems and Agricultural Eng.	2017 – Present
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Evonik Degussa Corporation

Senior Process Engineer	Mobile, Alabama	2002 – 2008
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CDI Engineering Group

Process Engineer	Mobile, Alabama	2000 – 2002
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BE&K Engineering

Process Engineer	Mobile, Alabama	1996 - 2000
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Honors and Awards

- 2018 Henry Mason Lutes Award for Excellence in Engineering Education
- 2018 Outstanding Teaching Award – Department of Chemical and Materials Engineering, Paducah Campus
- 2017 University of Kentucky Provost Outstanding Teaching Award
- 2017 Outstanding Teaching Award – Department of Chemical and Materials Engineering, Paducah Campus
- 2016 Fulbright Specialist Roster Member
- 2015 Finalist, Elsevier Green and Sustainable Chemistry Award
- 2015 College of Engineering Dean's Award for Excellence in Service
- 2013 Outstanding Teaching Award – Department of Chemical and Materials Engineering, Paducah Campus
- 2013 AIChE Sustainable Engineering Forum Education Award (Inaugural Recipient)

Products

- Joshi, C. and **J. Seay** (2018): "Total Generation & Combustion Emissions of Plastic Derived Fuels: A Trash to Tank Approach", *Environmental Progress and Sustainable Energy*, Accepted for Publication.
- Joshi, C. **J. Seay** and N. Banadda (2018): "A Perspective on a Locally Managed Decentralized Circular Economy for Waste Plastic in Developing Countries", *Environmental Progress and Sustainable Energy*, Accepted for Publication.
- Lone, S., V. Kumar, **J. Seay**, D. Englert and H. Hwang (2018): "Development of a New Correlation for Estimation of the Volumetric Mass Transfer Coefficient in a Stirred Tank Bioreactor Using Response Surface Methodology", *Environmental Progress and Sustainable Energy*, Early View Online.

4. Darkwah, K., B. Knutson, **J. Seay** (2018): “Multi objective versus single objective optimization of batch bioethanol production based on a time-dependent fermentation model”, *Clean Technology and Environmental Policy*, Vol. 20, Issue 6, pp 1271–1285.
5. Darkwah, K., Nokes, S., **J. Seay** and B. Knutson (2018): “Mechanistic Simulation of Batch Acetone-Butanol-Ethanol (ABE) Fermentation with *In Situ* Gas Stripping using Aspen Plus”, *Journal of Bioprocess and Biosystems Engineering*, Vol. 41, No. 9.
6. Rehman A., **Seay J.**, Badurdeen F. (2018). "Application of Bayesian Belief Network for the analysis of accident data in the bioenergy manufacturing sector. *Chemical Engineering Transactions*, Vol. 67.
7. Kabenge, I., G. Omulo, N. Banadda, **J. Seay**, A. Zziwa and N. Kiggundu (2018): “Characterization of Banana Peels Wastes as Potential Slow Pyrolysis Feedstock”, *Journal of Sustainable Development*, Vol. 11, No. 2.
8. Owusu, P., N. Banadda, A. Zziwa, **J. Seay**, and N. Kiggundu (2018): “Reverse engineering of plastic waste into useful fuel products”, *Journal of Analytical and Applied Pyrolysis*, Vol. 130, pp 285-293.
9. Darkwah, K., B. Knutson, **J. Seay** (2018): “A Perspective on the Challenges and Prospects for Applying Process Systems Engineering Tools to Fermentation-Based Biorefineries”, *ACS Sustainable Chemistry & Engineering*. Vol. 6, No. 3, pp 2829–2844.
10. Aboagye, D., R. Kambugu, **J. Seay**, N. Kiggundu, A. Zziwa, I. Kabenge, A. Komakech (2017): “Glucose Recovery from Different Corn Stover Fractions Using Dilute Acid and Alkaline Pretreatment Techniques”, *Journal of Ecology and Environment*, Vol. 41. No. 26.

National Offices Held

2018 – Present	1 st Vice-Chair, AIChE International Committee
2017 – 2018	2 nd Vice-Chair, AIChE International Committee
2017 – Present	Chair for Programming, AIChE Environmental Division
2016 – Present	Chair, AIChE SEF Awards Advisory Committee
2014 – 2016	Vice-Chair for Programming, AIChE Environmental Division
2013 – 2015	Chair, AIChE Sustainable Engineering Forum
2011 – 2013	Vice-Chair, AIChE Sustainable Engineering Forum
2011 – Present	Chair, AIChE Youth Council on Sustainable Science and Technology (YCOSST)
2011 – 2015	<i>Ex Officio</i> Member, AIChE Institute for Sustainability (IfS) Managing Board
2011 – 2015	<i>Ex Officio</i> Member, AIChE Center for Energy Initiatives Managing Board
2009 – 2011	Chair, Education Committee – AIChE Sustainable Engineering Forum
2008 – 2013	Member, Awards Committee – AIChE Sustainable Engineering Forum

Synergistic Activities

- Currently collaborating with the AIChE Institute for Sustainability on their sustainability credentialing program.
- Currently collaborating with the AIChE Sustainable Engineering forum to develop educational modules for incorporating sustainability into core chemical engineering courses.
- Recent recipient of an AIChE Grand Energy Challenge award with Dr. David Silverstein to develop energy related material for the Chemical Engineering Thermodynamics course.
- Currently collaborating with Makerere University in Kampala, Uganda to develop affordable green chemistry technology for rural people in underdeveloped countries.
- Active in the AIChE Sustainable Engineering Forum, currently serving as the 2014-2015 Chair. Previous Vice-Chair of the Forum and Chair of the Education Committee.

Registration

Licensed Professional Engineer in the State of Alabama, No. 24468