

KHALED A. M. GASEM

Resume

Professor
The University of Wyoming
Laramie, WY 82071

Telephone Office: 307-766-2845
Home: 405-269-2410
E-mail: gasem@uwyo.edu

ACADEMIC BACKGROUND

Ph. D., Chemical Engineering, Oklahoma State University (OSU), 1986
M. Sc., Chemical and Petroleum Refining Engineering, Colorado School of Mines, 1979
B. Sc., Chemical Engineering, University of California at Berkeley, 1976

MAJOR AREAS OF INTEREST

Energy and Environmental Systems
Enhanced Oil and Gas Recovery
Carbon Dioxide Sequestration
Phase Equilibria Thermodynamics
Molecular Design of Chemicals
Thermophysical Properties Modeling
Process Engineering/Simulation and Optimization

PROFESSIONAL EXPERIENCE

Professor, Departments of Chemical/Petroleum Engineering, University of Wyoming,
2014-present
Associate Vice President and Interim Dean of Engineering & Applied Science,
University of Wyoming, 2013-2014
Regents Professor, Bartlett Chair & Head, School of Chemical Engineering, OSU, 2012-2013
Interim Dean & Bartlett Chair, College of Engineering, Architecture and Technology, OSU,
2011-2012
Professor, Bartlett Chair and Head, School of Chemical Engineering, OSU, 2008-2011
Professor, Amoco Chair, School of Chemical Engineering, OSU, 2003-2008
R. N. Maddox Professor, School of Chemical Engineering, OSU, 1996-2003
Professor, School of Chemical Engineering, OSU, 1995-1996
Associate Professor, School of Chemical Engineering, OSU, 1991-1995
Assistant Professor, School of Chemical Engineering, OSU, 1989-1991
Visiting Assistant Professor, School of Chemical Engineering, OSU, 1987-1988
Research Associate, School of Chemical Engineering, Oklahoma State University, 1984-1987
Graduate Research Assistant, School of Chemical Engineering, OSU, 1982-1984
Instructor, Alfatah University, Tripoli, Libya, 1980-1981
Engineering Consultant, LEEB Engineering, Tripoli, Libya, 1980-1981
Research Assistant, National Bureau of Standards (NBS), Boulder, Colorado, 1978-1979
Graduate Research Assistant, University of Tripoli, Tripoli, Libya, 1977-1978
Research Assistant, Lawrence Berkeley Laboratory, Berkeley, California, 1976

RESEARCH EXPERIENCE*Strategic Planning*

Lead Strategic Planner

“The University of Wyoming Tier-1 Initiative”

College of Engineering & Applied Science, University of Wyoming, 2013-2014

Total Anticipated Six-Year Funding: \$90 million

2014-2015 Biennium Approved Funding: \$17.1 million

Consortia & Centers

Founding Member

“Center for Interfacial Reaction Engineering,”

U. S. Department of Energy, 2010-2013: \$5.87 million

Founding Member

“Coal-Seq II Consortium,”

U. S. Department of Energy/International Industry CO₂ Coal Sequestration Consortium

2005-2012: \$4,500,000

Founding Member, Former Chair and Associate Director

“Integrated Consortium of Energy and the Environment (ICEE); formerly IPEC,”

U. S. Environmental Protection Agency/Industry, 1995-2010: \$10,500,000

Research Projects

NSF, 2016-2020: \$5,999,113, Co-PI.

“Collaborative Research and Education on Synergized Transformational Solar Chemical Looping and Photo-Ultrasonic Renewable Biomass Refinery”

U.S. Department of Energy INL, 2016-2019: \$900,000, Co-PI

“Development of Direct Carbon Fuel Cells”

State of Wyoming, 2015-2016: \$300,000, Co-PI

“Developing Transformational Catalytic Chemical Looping Refining Technology for Fuel and Chemicals”

U. S. Department of Energy and RPSEA Consortium, 2013-2015: \$1,953,083, Co-PI (\$490,373)

“Petrophysics and Tight Rock Characterization for the Application of Improved Simulation and Production Technology in Shale”

U. S. Department of Energy, 2013-2016: \$2.97 Million, OSU PI (\$761,125)

“Center for Interfacial Reaction Engineering: Phase Behavior Modeling and Separations in Biphasic Systems”

U. S. Department of Energy, 2010-2013: \$486,607, OSU PI

“Center for Interfacial Reaction Engineering: Phase Behavior and Thermophysical Property Models for Bi-Phasic Catalytic Processes”

- Academy for Educational Development, 2010-2013: \$327,137, PI
"Iraq University Linkages Program"
- U. S. Department of Energy and Advanced Resources International, 2009-2013: \$705,043, PI
"Improved Models for Coalbed Methane Production and CO₂ Sequestration"
- National Institute of Health (NIH), 2006-2008: \$404,000, PI
"Design of Chemical Penetration Enhancers for Transdermal Drug Delivery"
- U. S. Department of Energy and Advanced Resources International, 2005-2008: \$262,500, PI
"Improved Models for Coalbed Methane Production and CO₂ Sequestration"
- U. S. Environmental Protection Agency - IPEC, 2003-2005: \$638,600, Co-PI
"Effective Stormwater and Sediment Control during Pipeline Construction Using a New Filter Fence Concept"
- U. S. Department of Energy, 1998-2003: \$876,175, PI
"Sequestering Carbon Dioxide in Coalbeds"
- Amoco Production Company, 1999: \$78,000, PI
"Adsorption Equipment Donation"
- Phillips/OCAST Applied Research Program, 1998-2001: \$300,000
"Design of Improved Solvents for Extractive Distillation"
- The National Science Foundation, 1997: \$140,000, Co-PI
"Engineering Research Equipment: Trace Organics"
- U. S. Department of Energy, 1996-2000: \$220,000, PI
"Phase Behavior of Light Gases in Hydrocarbon and Aqueous Solvents"
- Phillips Petroleum Company, 1996-1997: \$25,000, PI
"Separation Scheme for Methyl Mercaptan Production"
- Phillips/OCAST Applied Research Program, 1995-1997: \$300,000, PI
"Improved Solvents for Extractive Distillation"
- Phillips Petroleum Company, 1994-1995: \$80,000, Co-PI
"Improved Solvents for Extractive Distillation"
- Gas Processors Association, 1993-2000: \$180,000, PI
"Database Development: Maintenance and Evaluation of Data for GPA Data Bank"
- Gas Processors Association, 1993-2000: \$160,000, Co-PI
"Database Development: Enthalpy Data Maintenance and Evaluation"
- University Center for Energy Research, 1991-1993: \$300,000, Co-PI
"CVD Diamond Technology"
- U. S. Department of Energy, 1991-1993: \$199,000, Co-PI
"Equilibrium and Volumetric Data and Model Development for Coal Fluids"

Amoco Production Company, 1991: \$80,500, Co-PI
"Adsorption Equipment Donation"

Amoco Production Company/OCAST Applied Research Program, 1991-1993: \$175,000, Co-PI
"Adsorption Studies for Optimum Production of Coalbed Methane"

U. S. Department of Energy, 1991-1993: \$82,000, Co-PI
"Coalbed Methane Adsorption Studies"

University Center for Energy Research, 1990-1991: \$25,000, PI
"Phase Equilibrium in Mixtures of Interest to Energy Industries: Automated Data Acquisition and Model Development"

University Center for Energy Research, 1989: \$26,000, PI
"Phase Equilibrium in Mixtures of Interest to Energy Industries: Development of a New Experimental Capability"

Phillips Petroleum Company, 1988: \$91,200, Co-PI
"Measurements of Phase Densities and Interfacial Tensions for Systems of Interest to Phillips Petroleum Company"

Amoco Production Company & Chevron Oil Field Research Company, 1988: \$25,000, Co-PI
"Measurement and Correlation of Phase Behavior and Interfacial Tensions for Systems of Interest in Enhanced Oil Recovery Processes"

HONORS AND AWARDS

OSU Regents Professor, 2013-present

The OSU Regents Distinguished Research Award, 2010

OSU Inventor Recognition Award, 2009

Bartlett Chair 2008-2013

Amoco Chair, 2003-2008

The Gas Processors Suppliers Association, R. N. Maddox Professorship, 1996-2003

Halliburton Award of Excellence, College of Engineering Outstanding Faculty, 2000

Omega Chi Epsilon Teacher of the Year in Chemical Engineering, 1993

Service Award, American Institute of Chemical Engineers Central Oklahoma Section, 1992

Halliburton Award of Excellence, College of Engineering Outstanding Young Faculty, 1991

University of Tripoli Fellowship, Tripoli, Libya, 1981-1984

University of Tripoli Fellowship, Tripoli, Libya, 1978-1979

National Scholarship for Scholastic Achievement, Libyan Ministry of Education, 1972-1976

PROFESSIONAL AND HONOR SOCIETIES

Member, American Institute of Chemical Engineers

Member, American Chemical Society

Member, Phi Kappa Phi Honor Society

Member, Omega Chi Epsilon

PROFESSIONAL ACTIVITIES

Lead Strategic Planner, College of Engineering & Applied Science, UW, 2013-2014
Member, Wyoming Governor's Energy, Engineering, STEM Task Force UW, 2013-2014
Member, Board of Directors of Oklahoma Transportation Center, 2011-2012
U. S. Department of Energy Review Panel on Energy Related Research, 2009-2010
Chair of Executive Committee, Integrated Petroleum Environmental Consortium, 2007-2010
Associate Director, Integrated Petroleum Environmental Consortium, 1997-2010
Member, American Institute of Chemical Engineers Continuing Education Committee, 1992-1997
Chair, American Institute of Chemical Engineers, Local Section, 1992
Coordinator, Environmental Engineering Consortium, 1992-1995
Treasurer, American Institute of Chemical Engineers, Local Section, 1991
Advisor, American Institute of Chemical Engineers Student Chapter, 1988-1990

Consultant, Phillips/ConocoPhillips Petroleum Company, 1990-present
Consultant, Fractionation Research Inc., 1999-present
Consultant, General Planning Enterprise, 1984-present
Consultant, AlliedSignal, 1993-1994
Consultant, Occidental Oil Company, 1977-1978
Consultant, Ministry of Heavy Industries, Libya, 1980-1981
Consultant, Waha Oil Company, 1977-1978

Session Chair, AIChE Annual/National Meetings, 2000-2011
Session Chair, 10th International Petroleum Environmental Conference, 2003
Session Chair, 6th International Petroleum Environmental Conference, 1999
Chair, Processing Sector, Mediterranean International Energy Conference, 1998
Session Chair, 5th International Petroleum Environmental Conference, 1998
Co-Chair, 4th International Petroleum Environmental Conference, 1997
Session Chair, 3rd International Petroleum Environmental Conference, 1996

Consultant, Short Course on Research Methods, ConocoPhillips, 2008-present
Consultant, Short Course on Process Thermodynamics, Phillips Engineering Academy, 1998
Consultant, Short Course on Process Thermodynamics, McNeese State University, 1990

Co-Director, Gas Processors Association VLE/Enthalpy Database, 1993-2000
Consultant, Design of Methyl Mercaptan Plant, Phillips Petroleum Company, 1995
Director, Curriculum Development Group for College of Safety, Saudi Arabia, 1992

Co-Author, Two Proprietary Monographs "Improved Solvents for Extractive Distillation Solvents: Infinite-Dilution Activity Coefficient Measurements," 1998-2000

Developer, *PPF and GEOS Software*, Library-quality phase behavior programs supported by a number of specialized databases, 1988-present

Member, Editorial Board, *Scientific Journals International*, 2007-present.
Member, Editorial Board, *Journal of Thermodynamics*, 2007-present.
Member, Editorial Board, *Energy and Power Journal*, 2009-present.

Reviewer, National Science Foundation, Department of Energy, American Chemical Society, Fluid Phase Equilibria, Industrial Engineering Chemistry, AIChE Journal, Canadian Journal of Chemical Engineering, Chemical and Engineering Data, Heat Transfer Engineering, Chemical Engineering Communications, Thermo Physics, Langmuir, Patents Review, Energy & Fuels

UNIVERSITY SERVICE ACTIVITIES

University / College

Chair, the OSU Energy Initiative, 2005-2009; Co-Chair, 2011-present
 Member, University Faculty Council, Information Technology & Long-Range Planning Committee, 2010-present
 Member, the University Strategic Planning Council, 2009-present
 Member, the University Provost Search Committee, 2009
 Chair, Executive Committee of Integrated Petroleum Environmental Consortium, 2007-2010
 Chair, University Faculty Council, Information Technology & Long-Range Planning Committee, 2007-2010
 Member, the Master Plan Stakeholders Committee, 2005-present
 Member, Faculty Committee, Oklahoma State University Faculty Council, 2004-2006
 Member, OSU-Tulsa Advanced Technology Research Center Planning Committee, 2003-present
 Member, University Honorary Degrees Committee, 2003-2005
 Member, Oklahoma State University Termination Committee, 2003-present
 Chair, University Parking, Traffic Rules, and Planning Committee, 2003-2004
 Chair, University Faculty Council Facilities, Safety, and Security Committee, 2002-2007
 Member, Oklahoma State University Faculty Council, 2001-2004
 Chair, Executive Committee of Integrated Petroleum Environmental Consortium, 2000-2001
 Member, University Honors College, 2000-2005
 University Representative, BP Amoco Project, 1999
 University Representative, Kuwaiti EPA Project, 1999
 Member, Oklahoma State University Faculty Council, 1997-1998
 Associate Director, Integrated Petroleum Environmental Consortium, 1997-2010
 Mentor, Oklahoma Alliance for Minority Participation (OCAMP), 1997-present
 Coordinator, Environmental Engineering Consortium Seminar, 1994-1995
 Member, Associate Dean for Research Search Committee, College of Engineering, 1996
 Member, Executive Committee, South Western Resource Alliance, 1994-present
 University Faculty Council Representative, Financial System Committee, 1994-1996
 College of Engineering Representative, NSF EPSCoR Working Group, 1994
 Member, University Students Activities Committee, 1993-1995
 Mentor, High School Scholars Program, 1992
 Member, University Honorary Degrees Committee, 1992
 Member, University Academic Standards Committee, 1991-1993
 Chair, College of Engineering Faculty Council, 1991-1992
 Member, Advanced Technology Research Center Planning Group, 1991-1995
 Advisor, Arab Student Association, 1990-1993
 Liaison, Engineering Science Thermodynamics Oversight Committee, 1990-1993
 Chair-Elect, College of Engineering Faculty Council, 1990-1991
 Secretary, College of Engineering Faculty Council, 1988-1990

Coordinator, Environmental Engineering Consortium, 1991-1995
Founding Member, CVD Diamond Research Group, College of Engineering, 1990-1995
Representative, College of Engineering Faculty Council, 1988-1989

Petroleum Engineering

Director, Graduate Program, Department of Petroleum Engineering (UW), 2015-present.
Member, Promotion & Tenure Committee, College of Engineering & Applied Science (UW),
2015-present.

Chemical Engineering

Chair, Faculty Search Committee, School of Chemical Engineering, 2005-2009
Director, Graduate Program, 2001-present
Member, Graduate Committee, 2000-present
Chair, Faculty Search Committee, School of Chemical Engineering, 2000-2002
Member, Alumni Association Executive Committee, School of Chemical Engineering, 2000-2001
Member, Undergraduate Curriculum Revision Committee, 1999-2001
Chair, Head Search Committee, School of Chemical Engineering, 1997
Member, Head Search Committee, School of Chemical Engineering, 1994
Chair, External Funding Committee, School of Chemical Engineering, 1994-1997
Advisor, Environmental Program, School of Chemical Engineering, 1994-2000
School Liaison, OSU Women in Engineering, 1994-1996
Member, Faculty Search Committee, School of Chemical Engineering, 1993
Member, Unit Operations Laboratory Committee, School of Chemical Engineering, 1994-1997
Chair, Graduate Recruitment Committee, School of Chemical Engineering, 1988-1990
Advisor, Scholars Mentor Program, School of Chemical Engineering, 1988-1990
Representative, High School Recruitment, School of Chemical Engineering, 1988-1990
Member, Graduate Committee, School of Chemical Engineering, 1988-1995

PATENTS

- “Failure Avoidance by Effective Slit Fence,” U.S. Utility Patent Application No. 11/872,938,
2008
- “Failure Avoidance by Effective Slit Fence,” International Patent Application No.
PCT/US2007/081517, 2008
- “New Techniques for Design of Chemical Penetration Enhancers for Transdermal Drug
Delivery,” Provisional U. S. Patents, 2007
- “New Techniques for Fluid Property Predictions,” Provisional U. S. Patents, 2007
- “New Techniques for Extractive Solvent Design” U. S. Patent 6392115, 2002

PUBLICATIONS*Book Chapters*

1. Anikeev, V., K. A. M. Gasem and M. Fan. "Application of Supercritical Technologies in Clean Energy Production: A Review." *Advanced Applications of Supercritical Fluids in Energy Systems*, Lin Chen and Yuhiro Iwamoto (Eds), 2017.
2. Gasem, K. A. M., Z. Pan and R. L. Robinson, Jr. "Two-Dimensional Equation-of-State Modeling of Adsorption of Coalbed Methane Gases." *American Association of Petroleum Geologists Studies in Geology 59: Carbon Dioxide Sequestration in Geologic Media - State of the Science*, M. Grobe, J. C. Pashin, and R. L. Dogbe (Eds), 2009.
3. Gasem, K. A. M., S. Mohammad and R. L. Robinson, Jr. "Adsorption Models for Coalbed Methane Production and CO₂ Sequestration." *The Encyclopedia of Chemical Processing (ECHP)*, S. Lee (Ed), 2009.

Topical Reports

4. Gasem, K. A. M., S. A. Mohammad, J. S. Chen and R. L. Robinson, Jr. "Improved Adsorption Models for Coalbed Methane Production and CO₂ Sequestration." U. S. Department of Energy and Advanced Resources International, March 2008.
5. Gasem, K. A. M. "Modeling the Solubility of Elemental Mercury in Hydrocarbons and in Water: Binary Equilibrium Data Analyses and EOS Parameter Generalizations." ConocoPhillips, April 2006.
6. Gasem, K. A. M., J. E. Fitzgerald, S. A. Mohammad, J. S. Chen and R. L. Robinson, Jr. "CO₂ Adsorption on Selected Moist Coals." U.S. Department of Energy, March 2006.
7. Gasem, K. A. M. and S. S. Godavarthy. "Modeling the Solubility of Elemental Mercury in Hydrocarbons and in Water: Mercury Vapor Pressure Predictions." ConocoPhillips, November 2005.
8. Gasem, K. A. M., M. Sudibandriyo, J. E. Fitzgerald, Z. Pan and R. L. Robinson, Jr. "DOE Round Robin: CO₂ Adsorption on Selected Coals." U.S. Department of Energy, March 2003.
9. Gasem, K.A.M., Robinson, R. L., Jr., and S. R. Reeves. "Adsorption of Pure Methane, Nitrogen, and Carbon Dioxide and Their Mixtures on San Juan Basin Coal", Topical Report, DOE Contract No. DE-FC26-00NT40924, May, 2002.
10. Fitzgerald, J. E., Z. Pan, M. Sudibandriyo, R. L. Robinson, Jr., K. A. M. Gasem and S. R. Reeves. "Adsorption of Methane, Nitrogen, Carbon Dioxide and Their Mixtures on Wet Tiffany Coal." Topical Report, DOE Contract No. DE-FC26-00NT40924, May, 2002.
11. Wagner, J., E. Maase, K. A. M. Gasem and M. High "GPA Thermodynamic Data Base." Research Report RR-173, Gas Processors Association, May 2000.
12. Gasem, K. A. M., C. Schult, B. Neely and R. L. Robinson, Jr. "Improved Solvents for Extractive Distillation Solvents: Infinite-Dilution Activity Coefficient Measurements." Two Proprietary Monographs, Phillips Petroleum Company, April 2000.

Journal Articles

13. Xu, B. Q. Cao, D. Kuang, K. A. M. Gasem, H. Adidharma, D. Ding, and M. Fan. "Kinetics and mechanism of CO₂ gasification of coal catalyzed by Na₂CO₃, FeCO₃ and Na₂CO₃-FeCO₃." *Journal of the Energy Institute*, 93 (3), 922, 2020.
14. Liu, F.-J., K. A. M. Gasem, M. Tang, B. Xu, Z. Huang, R. Zhang, and M. Fan. "Enhanced liquid tar production as fuels/chemicals from Powder River Basin coal through CaO catalyzed stepwise degradation in eco-friendly supercritical CO₂/ethanol." *Energy*, 191, 116563, 2020.
15. Liu, F.-j., G.-H. Liu, K. A. M. Gasem, B. Xu, A. Goroncy, M.-C. Tang, Z.-X. Huang, M. Fan, and X.-Y. Wei. "Green and efficient two-step degradation approach for converting Powder River Basin coal into fuels/chemicals and insights into their chemical compositions." *Applied Energy*, 264, 114739, 2020.
16. Hu, X. E., Q. Yu, F. Barzagli, C. Li, M. Fan, K. A. M. Gasem, X. Zhang, E. Shiko, M. Tian, and X. Luo. "NMR Techniques and Prediction Models for the Analysis of Species Formed in CO₂ Capture Processes with Amine-Based Sorbents: A Critical Review." *ACS Sustainable Chemistry & Engineering*, 8(16), 6173, 2020.
17. Wang, X., M. Fan, X. Huang, M. Tang, G. Yu, H. Liu, F. Wang, H. Adidharma, K. A. M. Gasem, M. Radosz, and M. Fan. "High-performance nano-structured Ni based catalysts for high-temperature CO₂CH₄ reforming –Greenhouse gases to syngas is." *Catalysis Today*, 339, 344, 2020.
18. Xu, B., Q. Cao, D. Kuang, D. Ding, H. Adidharma, K. A. M. Gasem, and M. Fan. "Kinetics and mechanism of CO₂ gasification of coal catalyzed by Na₂CO₃, FeCO₃ and Na₂CO₃-FeCO₃." *Journal of the Energy Institute*, 2019.
19. Song, H., X. Zeyu, F. Cheng, K. A. M. Gasem, and M. Fan. "Improvement of dispersion stability of filler based on fly ash by adding sodium hexametaphosphate in gas-sealing coating." *Journal of Cleaner Production*, 235, 259, 2019.
20. Rony, A. H., L. Kong, W. Lu, M. Dejam, H. Adidharma, K. A. M. Gasem, Y. Zheng, U. Norton, and M. Fan. "Kinetics, thermodynamics, and physical characterization of corn stover (*Zea mays*) for solar biomass pyrolysis potential analysis." *Bioresource Technology*, 284, 466, 2019.
21. Lu, W., Q. Cao, B. Xu, H. Adidharma, K. A. M. Gasem, M. Argyle, F. Zhang, Y. Zhang, and M. Fan. "A New Approach to Control of CO₂ Emission and Optimal Use of C and H for Production of Desired Syngas from Coal." *JOULE-D-19-00444*, 2019.
22. Liu, F.-J., K. A. M. Gasem, M. Tang, B. Xu, Z. Huang, R. Zhang, and M. Fan. "Enhanced liquid tar production as fuels/chemicals from Powder River Basin coal through CaO catalyzed stepwise degradation in eco-friendly supercritical CO₂/ethanol." *Energy*, 116563, 2019.
23. Song, X., C. Wang, K. A. M. Gasem, K. Li, X. Sun, P. Ning, W. Gong, T. Wang, M. Fan, M., and L. Sun. "New insight into the reaction mechanism of carbon disulfide hydrolysis and the impact of H₂S with density functional modeling", *New Journal of Chemistry*, 2019.

24. Dadmohammadi, Y., S. Gebreyohannes, B. J. Neely and K. A. M. Gasem. "Application of modified NRTL models for binary LLE phase characterization." *Industrial & Engineering Chemistry Research*, 57(2), 7282, 2018.
25. Irani, M., A. T. Jacobson, K. A. M. Gasem, and M. Fan. "Facilely synthesized porous polymer as support of poly (ethyleneimine) for effective CO₂ capture." *Energy (Oxford, United Kingdom)*, 157, 1, 2018.
26. Song, H., W. Xie, J. Liu, F. Cheng, K. A. M. Gasem, and M. Fan. "Effect of surfactants on the properties of a gas-sealing coating modified with fly ash and cement." *Journal of Materials Science*, 53(21), 15142, 2018.
27. Liu, F. J., K. A. M. Gasem, M. Tang, A. Goroncy, X. He, Z. Huang, and K. Sun, and M. Fan. "Mild degradation of Powder River Basin sub-bituminous coal in environmentally benign supercritical CO₂-ethanol system to produce valuable high-yield liquid tar." *Applied Energy*, 460, 2018.
28. Xu, B., D. Kuang, F. Liu, W. Lu, A. K. Goroncy, T. He, K. A. M. Gasem, and M. Fan. "Characterization of Powder River Basin coal pyrolysis with cost-effective and environmentally-friendly composite Na-Fe catalysts in a thermogravimetric analyzer and a fixed-bed reactor." *International Journal of Hydrogen Energy*, 43(14), 6918, 2018.
29. Liu, Y., H. Dang, Y. Li, P. Charoensuppanimit, S. A. Mohammad, K. A. M. Gasem, and S. Wang. "Sequestration of carbon dioxide in coal: Energetics and bonding from first-principles calculations." *Computational Materials Science*, 133, 145, 2017.
30. Abudour, A. M., S. A. Mohammad, R. L. Robinson Jr., and K. A. M. Gasem. "Predicting PR EOS binary interaction parameter using readily available molecular properties." *Fluid Phase Equilibria*, 434, 1130, 2017.
31. Li, Qiaohong, Z. Ma, R. Sa, H. Adidharma, K. A. M. Gasem, A. G. Russell, M. Fan, Maohong, and K. Wu. "Computation-predicted, stable, and inexpensive single-atom nanocatalyst Pt@ Mo₂C—an important advanced material for H₂ production." *Journal of Materials Chemistry A*, 5(28), 14658, 2017.
32. Lu, W., T. He, B. Xu, X. He, H. Adidharma, M. Radosz, and K. A. M. Gasem. "Progress in catalytic synthesis of advanced carbon nanofibers." *Journal of Materials Chemistry A*, 5(27), 13863, 2017.
33. Zhang, F., Y. Zhang, L. Yuan, K. A. M. Gasem, J. Chen, F. Chiang, Y. Wang, and M. Fan. "Synthesis of Cu/Zn/Al/Mg catalysts on methanol production by different precipitation methods." *Molecular Catalysis*, 441, 190, 2017.
34. Irani, M., A. T. Jacobson, K. A. M. Gasem, and M. Fan. "Modified carbon nanotubes/tetraethylenepentamine for CO₂ capture." *Fuel*, 206, 10, 2017.
35. Ding J., T. Popa, J. Tang, K. A.M. Gasem, M. Fan, Q. Zhong. "Highly selective and stable Cu/SiO₂catalysts prepared with a green method for hydrogenation of diethyl oxalate into ethylene glycol." *Applied Catalysis B: Environmental* 209, 530, 2017.
36. Sun, K., W. Gong, K. Gasem, H. Adidharma, M. Fan, and R. P. Chen. "Catalytic methane dehydroaromatization with stable nano Fe doped on Mo/HZSM-5 synthesized with a simple and environmentally friendly method and clarification of a perplexing catalysis mechanism dilemma in this field for a period of time." *Industrial & Engineering Chemistry Research*, in press, 2017.

37. Sun, Z., B. Xu, A. H. Rony, S. Toan, S. Chen, K. A. M. Gasem, H. Adidharma, M. Fan, and W. Xiang. "Thermogravimetric and kinetics investigation of pine wood pyrolysis catalyzed with alkali-treated CaO/ZSM-5." *Conversion and Management*, 146, 182, 2017.
38. Huang X., X. Wang, M. Fan, Y. Wang, H. Adidharma, K. A.M. Gasem, and M. Radosz. "A cost-effective approach to reducing carbon deposition and resulting deactivation of oxygen carriers for improvement of energy efficiency and CO₂ capture during methane chemical-looping combustion." *Applied Energy* 193, 38, 2017.
39. Xu, X., Y. Chen, P. Wan, K. A. M. Gasem, K. Wang, T. He, H. Adidharma, and M. Fan. "Extraction of Lithium with Functionalized Lithium Ion-Sieves." *Progress in Material Science*, 84, 276, 2016.
40. Irani, M., K. A. M. Gasem, B. Butcher, and M. Fan. "CO₂ Capture using Nanoporous TiO (OH) 2/tetraethylenepentamine." *Fuel*, 183, 601, 2016.
41. Grada, A., S. Madihally, and K. A. M. Gasem. "LB816 Transdermal Delivery of Insulin using Novel Chemical Penetration Enhancers Designed in silico." *Journal of Investigative Dermatology*, 136 (8), B12, 2016.
42. Dadmohammadi, Y., S. Gebreyohannes, B. J., Neely, and K. A. M. Gasem. "Representation and Prediction of Vapor-Liquid Equilibrium Using the Peng-Robinson Equation of State and UNIQUAC Activity Coefficient Model." *Industrial & Engineering Chemistry Research*, 55(4), 1088, 2016.
43. Charoensuppanimit, P., S. A. Mohammad, and K. A. M. Gasem. "Measurements and Modeling of Gas Adsorption on Shales." *Energy & Fuels*, 30, 2309, 2016.
44. Gebreyohannes, S., Y. Dadmohammadi, B. J., Neely, and K. A. M. Gasem. "A Comparative Study of QSPR Generalized Activity Coefficient Model Parameters for VLE Mixtures." *Industrial & Engineering Chemistry Research*, 55(4), 1102, 2016.
45. Dadmohammadi, Y., S. Gebreyohannes, B. J., Neely, and K. A. M. Gasem. "Multicomponent Phase Behavior Predictions Using QSPR-Generalized NRTL and UNIQUAC Models." *Fluid Phase Equilibria* 409, 318, 2016.
46. Charoensuppanimit, P., S. A. Mohammad, R. L. Robinson Jr., and K. A. M. Gasem. "Modeling the Temperature Dependence of Supercritical Gas Adsorption on Activated Carbon, Coals, and Shales." *International Journal of Coal Geology*, 113, 138, 2015.
47. Charoensuppanimit, P., S. A. Mohammad, R. L. Robinson Jr., and K. A. M. Gasem. "Modeling the Temperature Dependence of Supercritical Gas Adsorption on Activated Carbon, Coals, and Shales." *International Journal of Coal Geology*, 113, 138, 2015.
48. Gebreyohannes, S., B. J., Neely, and K. A. M. Gasem. "A Generalized Interaction Parameter for Nonrandom Two-Liquid (NRTL) Activity Coefficient Model." *Fluid Phase Equilibria*, 53, 20247, 2014.
49. Abudour, A. M., S. A. Mohammad, R. L. Robinson Jr., and K. A. M. Gasem. "Generalized Binary Interaction Parameters for the Peng-Robinson Equation of State." *Fluid Phase Equilibria*, 383, 156, 2014.
50. Gebreyohannes, S., B. J., Neely, and K. A. M. Gasem. "One-Parameter Modified Nonrandom Two-Liquid (NRTL) Activity Coefficient Model." *Fluid Phase Equilibria*, 379, 196, 2014.

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Presentations

1. Gasem, K. A. M. (*keynote speaker*) "Energy: Challenges & Opportunities s." Presented at the ICCPGE Conference, Alkhoms, Libya, December 20-24, 2016.
2. Gasem, K. A. M. "Improved Generalized Phase Behavior Models for the Chemical and Energy Sectors." Presented at the ICCPGE Conference, Alkhoms, Libya, December 20-24, 2016.
3. Gasem, K. A. M. "The Geopolitics of Energy Challenges & Opportunities." Presented at the American Committees on Foreign Relations (ACFR) Meeting, Albuquerque NM, March 9, 2016.
4. Gasem, K. A. M. (*keynote speaker*), Generalized Simplified Local-Density (SLD) Model for Pure and Mixed-Gas Adsorption." Presented at First International Symposium on Aerogels, Nanjing, China, October 18, 2015.
5. Gasem, K. A. M., "Models for High-Pressure Adsorption: Comparison of Theories." Presented at Nanjing Tech University, Nanjing, China, October 20, 2015.
6. Gasem, K. A. M. "The Geopolitics of Energy Challenges & Opportunities." Presented at the American Committees on Foreign Relations (ACFR) 20th Annual Conference, Washington DC, April 23-24, 2015.
7. Gasem, K. A. M. "Global Energy Realities." Presented at Wyoming Goes Global Conference Laramie , WY, March 30-31, 2014.
8. Charoensuppanimit, P., Dadmohammadi, Y., S. A. Mohammad, R. L. Robinson Jr. and K. A. M. Gasem. "Measurements and Modeling of High-Pressure Gas Adsorption on Shales." Presented at AIChE Annual Meeting, Atlanta, GA, November 16-21, 2014.
9. Abudour, A., S. A. Mohammad, R. L. Robinson Jr. and K. A. M. Gasem. "Generalized Binary Interaction Parameters for the Peng-Robinson Equation of State." Presented at AIChE Annual Meeting, Atlanta, GA, November 16-21, 2014.
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11. Dadmohammadi, Y., S. B. Gebreyohannes, B. J. Neely, R. L. Robinson Jr. and K. A. M. Gasem. "Application of Two Novel Modified NRTL Models for Stability Check, Miscibility, Incipient and Coordinates of Consolute Point of Binary Liquid-Liquid Equilibria Systems." Presented at AIChE Annual Meeting, Atlanta, GA, November 16-21, 2014.
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13. Yerramsetty, K. M., B. J. Neely, and K. A. M. Gasem, "Generalized Non-linear QSPR Models for Liquid Viscosity." Presented at AIChE Annual Meeting, San Francisco, CA, October 3-8, 2013.

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22. Gasem, K. A.M. "Perspectives on Energy and Product Development Research." Presented at Al-Mergheb University, Khomis, Libya, July 15, 2013.
23. Gasem, K. A.M. "Structure-Property Modeling of Skin Irritation and Sensitization Research." Presented at Interdisciplinary Toxicology Forum, Stillwater, OK, February 21, 2013.
24. Gebreyohannes, S. B., K. M. Yerramsetty, B. J. Neely, and K. A.M. Gasem. "A Theory-Framed Quantitative Structure-Property Relationship (QSPR) Model for Liquid-Liquid Equilibrium." Presented at AIChE Annual Conference, Pittsburgh, PA, October 28, 2012.
25. Chareonsuppanimit, P., S. A. Mohammad, R. L. Robinson, Jr., and K. A. M. Gasem. "Modeling Gas Adsorption-Induced Swelling of Coals." Presented at AIChE Annual Conference, Pittsburgh, PA, October 28, 2012.
26. Mohammad, S. A., P. Chareonsuppanimit, A. Abudour, R. L. Robinson, Jr., and K. A. M. Gasem. "Measurements and Modeling of In-Situ Gas Densities and Adsorption Isotherms for CO₂ on Wet Coals." Presented at AIChE Annual Conference, Pittsburgh, PA, October 28, 2012.

27. Yerramsetty, K. M., B. J. Neely, and K. A. M. Gasem. "Generalized Non-Linear QSPR Models for Surface Tension." Presented at AIChE Annual Conference, Pittsburgh, PA, October 28, 2012.
28. Abudour, A. S. A. Mohammad L. Robinson, Jr., and K. A. M. Gasem. "A New Volume Translated Peng-Robinson Equation of State for Saturated and Single-Phase Liquid Densities." Presented at AIChE Annual Conference, Pittsburgh, PA, October 28, 2012.
29. Whitebay, E. A., J. D. Ramsey, B. J. Neely, and K. A. M. Gasem. "In Silico Prediction of Cancer Mechanism of Action." Presented at AIChE Annual Conference, Pittsburgh, PA, October 28, 2012.
30. Odafin C. E, S. B. Gebreyohannes, T. N. Pham, J. A. Faria, B. J. Neely, and K. A. M. Gasem. "Process Simulation of a Bi-Phasic Reaction: Hydrogenation of p-Hydroxybenzaldehyde." Presented at AIChE Annual Conference, Pittsburgh, PA, October 28, 2012.
31. Gasem, K. A. M. "Phase Behavior and Thermophysical Property Modeling." Presented at the CIRE Board Meeting, Norman, April 6, 2012.
32. Gasem, K. A. M. "Adsorption Behavior Modeling for Unconventional Gas Recovery and CO₂ Sequestration." Presented at the University Oklahoma, Norman, April 2, 2012.
33. Gasem, K. A. M. "Multiphase Analysis of Gas/Water Mixture Adsorption on Coals." Presented at Annual meeting of the American Chemical Society, San Diego, March 27, 2012.
34. Gasem, K. A. M. "Modeling the Effect of Moisture on the Adsorption of CBM Gases on Coals." Presented at Carnegie Mellon University, Pittsburgh, February 24, 2011
35. Bagheri, M., K. M. Yerramsetty, B. J. Neely, and K. A. M. Gasem. "Improved Nonlinear Models for the Refractive Index (RI) of Organic and Inorganic Materials." Presented at AIChE Annual Conference, Minneapolis, MN, October 17, 2011.
36. Bagheri, M., K. M. Yerramsetty, B. J. Neely, and K. A. M. Gasem. "A New Auto-Ignition Temperature Model for Pure Hydrocarbons." Presented at AIChE Annual Conference, Minneapolis, MN, October 17, 2011.
37. Gebreyohannes, S., K. M. Yerramsetty, B. J. Neely, and K. A. M. Gasem. "Generalized Activity Coefficient Models for VLE Mixture Predictions." Presented at AIChE Annual Conference, Minneapolis, MN, October 17, 2011.
38. Whitebay, E. A., J. D. Ramsey, B. J. Neely, and K. A. M. Gasem. "In Silico Prediction of Cancer GI50." Presented at AIChE Annual Conference, Minneapolis, MN, October 17, 2011.
39. Yerramsetty, K. M., B. J. Neely, and K. A. M. Gasem. "Computer-Aided Molecular Design: Methodology and Applications." Presented at AIChE Annual Conference, Minneapolis, MN, October 17, 2011.
40. Gasem, K. A. M., K. M. Yerramsetty, and B. J. Neely. "Phase Behavior and Thermophysical Property Models for Bi-Phasic Catalytic Processes." Presented at the CIRE Annual Meeting, Norman, Oklahoma, April 5, 2011.
41. Gasem, K. A. M., S. A. Mohammad, and R. L. Robinson, Jr. "Multiphase Analysis for CO₂/Water Mixed-Gas Adsorption on Coals." Presented at the SPE International Conference on CO₂ Capture, Sequestration and Utilization, New Orleans, Louisiana, November 10-12, 2010.

42. Yerramsetty, K. M., S. V. Madihally, B. J. Neely, and K. A. M. Gasem. "Skin Permeability Model of Insulin in the Presence of Chemical Penetration Enhancer." Presented at Diabetes Research Summit, Oklahoma City, OK, November 20, 2010.
43. Yerramsetty, K. M., B. J. Neely, and K. A. M. Gasem. "Quantitative Structure-Property Relationship Model for Prediction of IGC50 Toxicity Potentials." Presented at the AIChE Annual Meeting, Salt Lake City, UT, November 8, 2010.
44. Bagheri, M., K. M. Yerramsetty, B. J. Neely, and K. A. M. Gasem. "Theory-Based Quantitative Structure-Property Relationship Models for Standard Heat of Formation Predictions," Presented at the AIChE Annual Meeting, Salt Lake City, UT, November 8, 2010.
45. Yerramsetty, K. M., B. J. Neely, and K. A. M. Gasem. "Quantitative Structure-Property Relationship Model for Prediction of Octanol-Water Partition Coefficient." Presented at the AIChE Annual Meeting, Salt Lake City, UT, November 8, 2010.
46. Yerramsetty, K. M., B. J. Neely, and K. A. M. Gasem. "Quantitative structure-property Relationship Models - A Comparison of Different Methodologies." Presented at the AIChE Annual Meeting, Salt Lake City, UT, November 8, 2010.
47. Gasem, K. A. M., A. Abudour, B. J. Neely, and R. L. Robinson, Jr. "Modeling High-Pressure Phase Equilibria of Coalbed Gases and Water with a Modified Peng- Robinson Equation of State." Presented at AIChE Annual Meeting, Salt Lake City, UT, November 8, 2010.
48. Mohammad, S. A., J. S. Chen, R. L. J. Robinson, Jr., and K. A. M. Gasem. "A New Modeling Approach for CO₂/Water Mixed-Gas Adsorption on Coals." Presented at the AIChE Annual Meeting, Salt Lake City, UT, November 8, 2010.
49. Yerramsetty, K. M., B. J. Neely, and K. A. M. Gasem. "Theory-Based Quantitative Structure-Property Relationship Models for Phase Behavior Predictions." Presented at the AIChE Annual Meeting, Salt Lake City, UT, November 8, 2010.
50. Gasem, K. A. M., K. M. Yerramsetty, V. K. Rachakonda, B. J. Neely, S. Golla, S., H. Fahlenkamp, J. D Ramsey, R. L., Robinson, Jr. and S. V. Madihally. "Virtual Design of Chemical Penetration Enhancers for Transdermal Drug Delivery of Insulin." Presented at the 2nd International Conference on Drug Discovery and Therapy, Dubai, UAE, February 1-4, 2010.
51. Gasem, K. A. M., K. M. Yerramsetty, V. K. Rachakonda, B. J. Neely, and S. V. Madihally. "Effect of Different Enhancers on the Transdermal Permeation of Insulin Analog." Presented at the 2nd International Conference on Drug Discovery and Therapy, Dubai, UAE, February 1-4, 2010.
52. Gasem, K. A. M., Mohammad, S. A., and R. L. Robinson, Jr. "Modifications to the SLD-PR Model for Pure Water Adsorption on Activated Carbons and Coals." Presented at AIChE Annual Meeting, Nashville, TN, November 8-13, 2009.
53. Gasem, K. A. M., Yerramsetty, K. M., and B. J. Neely. "Quantitative Structure-Property Relationship Model for Prediction of Octanol-Water Partition Coefficient." Presented at AIChE Annual Meeting, Nashville, TN, November 8-13, 2009.
54. Gasem, K. A. M., Yerramsetty, K. M., Ramsey, J. D., and B. J. Neely. "Quantitative Structure-Property Relationship Model for Prediction of Blood-Brain Barrier Permeability." Presented at AIChE Annual Meeting, Nashville, TN, November 8-13, 2009.

55. Gasem, K. A. M., Mohammad, S. A., and R. L. Robinson Jr. "Generalized SLD-PR Adsorption Model for Pure and Mixed Gases on Coals." Presented at VIII Ibero-American Conference on Phase Equilibria and Fluid Properties for Process Design, Praia da Rocha, Portugal, 17-20 October, 2009.
56. Gasem, K. A. M., Yerramsetty, J. D., and B. J. Neely. "Modeling the Octanol-Water Partition Coefficient: The Quantitative-Structure Property Relationship (QSPR) and Theory-Based QSPR Approaches." Presented at VIII Ibero-American Conference on Phase Equilibria and Fluid Properties for Process Design, Praia da Rocha, Portugal, 17-20 October, 2009.
57. Gasem, K. A. M. Gasem and Sayeed Mohammed. "Energy: Challenges and Opportunities." Presented at the 40th Energy Information Dissemination Program, Stillwater, OK, June 9, 2009.
58. Neely, B. J., S. Golla, E. a. Whitebay, S. V. Madihally, R. L. Robinson Jr. and K. A. M. Gasem. "Modeling Skin Permeation with Quantitative Structure-Property Relationships." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
59. Neely, B. J., R. L. Robinson Jr. and K. A. M. Gasem. "Theory-Framed Quantitative Structure-Property Relationship Modeling for Aqueous System Multiple Temperature Infinite-Dilution Activity Coefficients." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
60. Golla, S., B. J. Neely, R. L. Robinson Jr. and K. A. M. Gasem. "Phase Equilibria Modeling: Structure-Based Generalized Models for Activity Coefficients." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
61. Golla, S., K. Yerramsetty, B. J. Neely, S. V. Madihally, R. L. Robinson Jr. and K. A. M. Gasem. "Quantitative Structure-Property Relationship Modeling of Skin Sensitization. A Quantitative Prediction." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
62. Golla, S., K. Yerramsetty, B. J. Neely, S. V. Madihally, R. L. Robinson Jr. and K. A. M. Gasem. "Quantitative Structure-Property Relationship Modeling of Skin Irritation." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
63. Yerramsetty, K., V. K. Rachakonda, S. V. Madihally, R. L. Robinson Jr. and K. A. M. Gasem. "Influence of Enhancer Characteristics and Drug Hydrophobicity." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
64. Neely, B. J., R. L. Robinson Jr. and K. A. M. Gasem. "Experimental Mutual Solubility Measurements of Selected Hydrocarbon-Water Systems." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
65. Mohammad, S. A., J. S. Chen, R. L. Robinson Jr. and K. A. M. Gasem. "Generalized SLD-PR Adsorption Model for Pure and Mixed Gases on Coal Matrices." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
66. Mohammad, S. A., Z. Pan, J. S. Chen, R. L. Robinson Jr. and K. A. M. Gasem. "Two-Dimensional Equation of State Modeling of Adsorption of Coalbed Methane Gases." Presented at AIChE Annual Meeting, Philadelphia, PA, November 16, 2008.
67. Reeves, Scott, Satya Harpalani and Khaled Gasem. "Results, Status and Future Activities of the COAL-SEQ Consortium." Presented at the 2008 International Coalbed Methane & Shale Gas Symposium, Tuscaloosa, Alabama, May 16-20, 2008.

68. Reeves, Scott, Satya Harpalani and Khaled Gasem. "Results, Status and Future Activities of the COAL-SEQ Consortium." Presented at the DOE Laboratory in Pittsburgh, Pittsburgh, PA, June 17, 2008.
69. Gasem, K A. M. and R. L. Robinson, Jr. "Adsorption Modeling Update." Presented at the DOE Sponsored Sixth International Forum on Geologic Sequestration of CO₂ in Deep, Unmineable Coalseams - Coal-Seq VI., Houston, TX, April 10-11, 2008.
70. Rachakonda, V. K., K. Yerramsetty, S. V. Madihally, R.L. Robinson, Jr. and K. A. M. Gasem. "Screening Of Chemical Penetration Enhancers for Transdermal Drug Delivery." Presented at the AIChE Annual Meeting, Salt Lake City, Utah, November 5, 2007.
71. Golla, S., E. A. Whitebay, B. J. Neely, S. V. Madihally, R. L. Robinson, Jr. and K. A. M. Gasem. "A Genetic Algorithm for virtual Design of Chemical Penetration Enhancers." Presented at the AIChE Annual Meeting, Salt Lake City, Utah, November 2007.
72. Krishna, V., B. J. Neely, S. V. Madihally, R. L. Robinson, Jr. and K. A. M. Gasem. "Validation of Improved Permeation Enhancers for Transdermal Drug Delivery." Presented at the AIChE Annual Meeting, Salt Lake City, Utah, November 2007.
73. Whitebay, E. A., B. J. Neely, S. Kumar, S. V. Madihally, R. L. Robinson, Jr. and K. A. M. Gasem. "Developing New Models to Predict Drug Properties." Presented at the AIChE Annual Meeting, Salt Lake City, Utah, November 2007.
74. Neely, B. J., R. L. Robinson, Jr. and K. A. M. Gasem. "Theory-Framed Quantitative Structure-Property Relationship Modeling for Aqueous System Multiple Temperature Infinite-Dilution Activity Coefficients." Presented at the International Petroleum Environmental Conference, Houston, Texas, November 2007.
75. Neely, B. J., R. L. Robinson, Jr. and K. A. M. Gasem. "Mutual Solubilities of Selected Hydrocarbon-Water Systems." Presented at the International Petroleum Environmental Conference, Houston, Texas, November 2007.
76. Gasem, K. A. M. "Virtual Design of Chemicals." Presented at the Chemical Engineering Department, University of Missouri, Rolla, MO, October 24, 2007.
77. Goodman, A., K. A. M. Gasem et al. "CO₂ Isotherms Measured on Moisture- equilibrated Argonne Premium Coal at 55 °C and Pressures to 15 MPa" Presented at 2007 International Coalbed Methane Symposium, Tuscaloosa, AL, May 21, 2007.
78. Gasem, K A. M. "Equilibrium Adsorption Modeling of Aqueous Systems." Presented at the EPA/Industry Meeting for Water Quality Modeling, Greenville, SC, December 11, 2006.
79. Gasem, K A. M., Z. Pan and R. L. Robinson, Jr. "Iteration Function Method for Mixture Adsorption Calculations." Presented at the AIChE Annual Meeting, San Francisco, CA, November 11, 2006.
80. Gasem, K A. M., S. S. Godavarthy, S. V. Madihally and R. L. Robinson, Jr. "Design of Improved Permeation Enhancers for Transdermal Drug Delivery Part I - Model Development." Presented at the AIChE Annual Meeting, San Francisco, CA, November 11, 2006.
81. Gasem, K A. M., M. Sudibandriyo and R. L. Robinson, Jr. "A Generalized Ono-Kondo Lattice Model for High-Pressure Adsorption." Presented at the AIChE Annual Meeting, San Francisco, CA, November 11, 2006.

82. Gasem, K A. M., A. Kasturirangan and R. L. Robinson, Jr. "Structure-Based Generalizations of EOS Interaction Parameters for Predicting Vapor-Liquid Equilibria of Asymmetric Mixtures." Presented at the AIChE Annual Meeting, San Francisco, CA, November 11, 2006.
83. Gasem, K A. M. and R. L. Robinson, Jr. "Adsorption Modeling Update." Presented at the DOE Sponsored Fifth International Forum on Geologic Sequestration of CO₂ in Deep, Unmineable Coalseams - Coal-Seq V., Houston, TX, November 8, 2006.
84. Barfield, B., S. Yeri, E. Stevens and K. A. M. Gasem. "Effective Silt Fence for Pipe and Construction Sites." Presented at the 13th International Petroleum Environmental Consortium (IPEC) Conference, San Antonio, TX, October 17, 2006.
85. Fitzgerald, J. E., R. L. Robinson, Jr. and K. A. M. Gasem. "Equilibrium Adsorption of Carbon Dioxide, Methane and Nitrogen Gases on Argonne Premium Coals and an Activated Carbon at Various Moisture Content." Presented at the 13th International Petroleum Environmental Consortium (IPEC) Conference, San Antonio, TX, October 17, 2006.
86. Reeves, S. R., K. A. M. Gasem, K., J. G. Blencoe and S. Harpalani. "The Coal-Seq II Consortium - Advancing the Science of CO₂ Sequestration in Deep, Unmineable Coalseams." Presented at the 8th International Conference on Greenhouse Gas Control Technologies (GHGT-8), Trondheim, Norway, June 19-22, 2006.
87. S. S. Godavarthy, R. L. Robinson, Jr. and K. A. M. Gasem. "Generalized SVRC-QSPR Model for Prediction of Saturated Liquid and Vapor Viscosities." Presented at the AIChE Spring National Meeting, Orlando, FL, April 23, 2006.
88. Fitzgerald, J. E., S. A. Mohammed, J. S. Chen, R. L. Robinson, Jr. and K. A. M. Gasem. "Equilibrium Adsorption of Carbon Dioxide, Methane, and Nitrogen on Argonne Premium Coals and on Activated Carbon at Various Moisture Content." Presented at the AIChE Spring National Meeting, Orlando, FL, April 23, 2006.
89. Yeri, S., B. J. Barfield, E. W. Stevens, K. A. M. Gasem, J. Arjunan and J. Hayes. "FAEST, a New Silt Fence Technology that Is Effective at Construction Sites." Presented at EC06 IECA's Annual Conference and Expo, Long Beach, CA, February 2006.
90. Gasem, K A. M. and R. L. Robinson, Jr. "Adsorption Modeling Update." Presented at the DOE Sponsored Fourth International Forum on Geologic Sequestration of CO₂ in Deep, Unminable Coalseams - Coal-Seq IV., Denver, CO, November 9, 2005.
91. Gasem, K A. M. "The OSU Energy Initiative." Presented at the 38th Annual Frontiers of Power Conference, Stillwater, OK, October 24, 2005.
92. Ravindranath, D., S. S. Godavarthy, R. L. Robinson, Jr. and K. A. M. Gasem. "Generalized UNIQAC-QSPR Model for Vapor-Liquid Equilibria Predictions of Binary Mixtures." Presented at the AIChE Annual Meeting, Cincinnati, OH, October 30, 2005.
93. Jegadeesam, A., S. S. Godavarthy, R. L. Robinson, Jr. and K. A. M. Gasem. "Generalized QSPR Predictions of Saturated Liquid and Vapor Viscosities." Presented at the AIChE Annual Meeting, Cincinnati, OH, October 30, 2005.
94. Jegadeesam, A., S. S. Godavarthy, R. L. Robinson, Jr. and K. A. M. Gasem. "Generalized QSPR Predictions of Interfacial Tensions." Presented at the AIChE Annual Meeting, Cincinnati, OH, October 30, 2005.

95. Fitzgerald, J. E., Arumugam, A., R. L. Robinson, Jr. and K. A. M. Gasem. "SLD Adsorption Model of Pure Coalbed Gases on Dry Argonne Premium Coal Matrices." Presented at the AIChE Annual Meeting, Cincinnati, OH, October 30, 2005.
96. Fitzgerald, J. E., R. L. Robinson, Jr. and K. A. M. Gasem. "Experimental Uncertainties of Volumetric Methods for Measuring Equilibrium Adsorption." Presented at the AIChE Annual Meeting, Cincinnati, OH, October 30, 2005.
97. Ravindranath, D., S. S. Godavarthy, R. L. Robinson, Jr. and K. A. M. Gasem. "Generalized Models for Vapor-Liquid Equilibria Predictions." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Albuquerque, NM, October 2005.
98. Fitzgerald, J. E., A. Arumugam, R. L. Robinson, Jr. and K. A. M. Gasem. "SLD Adsorption Model of Pure Coalbed Gases on Dry Argonne Premium Coal Matrices." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Albuquerque, NM, October 2005.
99. Reeves S.R., Gonzalez, R., Gasem, K.A.M., Fitzgerald, J.E., Pan, Z., Sudibandriyo, M., and Robinson, R. L., Jr. "Measurement and Prediction of Single- and Multi-component Methane, Carbon Dioxide, and Nitrogen Isotherms for U.S. Coals." Presented at the 2005 International Coalbed Methane Symposium, Tuscaloosa, Alabama, May 16-20, 2005.
100. Arjunan, J., S. Yeri, E. Stevens, B. J. Barfield, and K. A. M. Gasem. "Application of Polyacrylamide to Enhance Silt Fence Performance." Presented at the World Water and Environmental Resources Congress (ASCE-EWRI), Anchorage, Alaska, May 15-19, 2005.
101. Yeri, S., E. Stevens, B. J. Barfield, K. A. M. Gasem, J. Arjunan, and M. Matlock, J. Hynes. "FAEST, a New Silt Fence Technology for Construction Sites." Presented at the World Water and Environmental Resources Congress (ASCE-EWRI), Anchorage, Alaska, May 15-19, 2005.
102. Yeri, S. B. J. Barfield, E. W. Stevens, K. A. M. Gasem, J. Arjunan, and J. Hayes. "Effective Storm Water and Sediment Control during Pipe Line Construction using New Filter Fence Concept." Presented at the IPEC Meeting, Houston, TX, November 2005.
103. Yeri, S., E. W. Stevens, B. J. Barfield, J. Arjunan, and K. A. M. Gasem. "Failure Avoidance and Effective Silt Fence Technology for Sediment Control." Poster presentation at Oklahoma Water 2005 Conference, Tulsa, OK, September 2005.
104. Gasem, K. A. M., Z. Pan, J. E. Fitzgerald, M. Sudibandriyo and R. L. Robinson, Jr. "Adsorption Modeling Update." Presented at the DOE Sponsored Third International Forum on Geologic Sequestration of CO₂ in Deep, Unminable Coalseams - Coal-Seq III., Washington D. C., March 6-7, 2004.
105. Gasem, K. A. M., Arumugam, A., J. E. Fitzgerald, M. Sudibandriyo, Z. Pan, and R. L. Robinson, Jr. "High-Pressure Adsorption of Pure Coalbed Gases on Dry Coal Matrices." Presented at the AIChE Annual Meeting, Austin, Texas, November 7, 2004.
106. Godavarthy, S. S., P. Ravindranath, R. L. Robinson, Jr. and K. A. M. Gasem. "Structure Based Generalizations of NRTL Parameters for Correlation of Vapor-Liquid Equilibria of Binary Mixtures." Presented at the AIChE Annual Meeting, Austin, Texas, November 7, 2004.

107. Pan, Z., J. E. Fitzgerald, M. Sudibandriyo, R. L. Robinson, Jr. and K. A. M. Gasem. "Two-Dimensional Equation-of-State Modeling for Mixture Adsorption." Presented at the AIChE Annual Meeting, Austin, Texas, November 7, 2004.
108. Gasem, K. A. M., J. E. Fitzgerald, M. Sudibandriyo, Z. Pan, and R. L. Robinson, Jr. "Equilibrium Adsorption Models for Coalbed Methane and CO₂ Sequestration Processes." Presented at the AIChE Annual Meeting, Austin, Texas, November 7, 2004.
109. Gasem, K. A. M. "Adsorption Models for Coalbed Methane Production and CO₂ Sequestration." Presented at the SPE Workshop: Enhanced Coalbed Methane Recovery and Carbon Sequestration, Denver, CO, October 28, 2004.
110. Godavarthy, S. S., B. J. Neely, R. L. Robinson, Jr., and K. A. M. Gasem "Improved QSPR Models for Infinite-Dilution Activity Coefficients of Aqueous Systems." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Albuquerque, NM, October 2004.
111. Arjunan, J., E. Stevens, B. Barfield and K. A. M. Gasem. "Application of Polyacrilimide to Enhance Silt Fence Performance." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Albuquerque, NM, October 2004.
112. Stevens, E. W., K. A. M. Gasem, B. J. Barfield, and M. D. Matlock. "On and off Site Sediment Control Using Silt Fence." Presented at the World Water and Environmental Resources Congress, Salt Lake City, UT, June 2004.
113. Arjunan, J., E. Stevens, B. Barfield and K. A. M. Gasem. "The Failure Avoidance and Effective Silt Fence Technology (FAESF): Modeling and Laboratory Evaluation." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Albuquerque, NM, October 2004.
114. Gasem, K. A. M., J. E. Fitzgerald, M. Sudibandriyo, Z. Pan, Arumugam, A., and R. L. Robinson, Jr. "Equilibrium Adsorption Models for Coal Bed Methane and CO₂ Sequestration Processes." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Albuquerque, NM, October 2004.
115. Christianson, R. D., B. J. Barfield, J. C. Hayes, K. A. M. Gasem, and G. Brown. "Modeling Effectiveness of Bioretention Cells for Control of Stormwater Quantity." Presented at the EWRI Conference, Salt Lake City, Utah, June 27- July 1, 2004.
116. Gasem, K. A. M. "Modeling High-Pressure Adsorption: Application to Coalbed Methane Processes." Presented at Henry E. Bent Distinguished Lecture Series, Chemical Engineering Department, University of Missouri-Columbia, Columbia, MO, February 12, 2004.
117. Gasem, K. A. M. "Equilibrium Adsorption Modeling in Coalbed Methane and CO₂ Sequestration Processes." Presented at the Chemical Engineering Department, University of Arkansas, Fayetteville, AR, April 22, 2004.
118. Gasem, K. A. M. "Adsorption Models for Coalbed Methane Production and CO₂ Sequestration." Presented at the Chemical Engineering Department, Stanford University, San Jose, CA, May 5, 2004.
119. Godavarthy, S. S., D. Ravindranath, R. L. Robinson, Jr. and K. A. M. Gasem. "Generalized SVRC-QSPR Predictions of Saturated Vapor Pressure and Phase Densities." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 26- April 30, 2004.

120. Kasturirangan, A., Godavarthy, S. S., R. L. Robinson, Jr. and K. A. M. Gasem. "UNIFAC Implementation of Excess Gibbs/Helmholtz Energy Mixing Rules to Model Asymmetric Fischer-Tropsch Mixtures." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 26- April 30, 2004.
121. Seddigi, Z. S., B. A. Sharkh, A. Al-Ghamdi, A. Al-Ghatani, M. Khaled, M. Makkawi, I. Dincer, K. A. M. Gasem, and R. M. Al-Marzoqi "Scientific Research in the Arab World: Obstacles and Possible Solutions." Presented at 3rd International Conference on Scientific Research and Technology Development in the Arab World, Riyadh, Saudi Arabia, April 2004.
122. Fitzgerald, J. E., R. L. Robinson, Jr. and K. A. M. Gasem "Phase Equilibria of High-Pressure Gas Adsorption on Carbon Adsorbents in Water." Presented at the AIChE Annual Meeting, San Francisco, CA, November 16-21, 2003.
123. Sudibandriyo, M., J. E. Fitzgerald, Z. Pan, R. L. Robinson, Jr. and K. A. M. Gasem. "Modeling High-Pressure Mixture Adsorption." Presented at the AIChE Annual Meeting, San Francisco, CA, November 16-21, 2003.
124. Godavarthy, S. S., B. Neely, R. L. Robinson, Jr. and K. A. M. Gasem. "Modeling of Infinite-Dilution Activity Coefficients of Aqueous Systems." Presented at the AIChE Annual Meeting, San Francisco, CA, November 16-21, 2003.
125. Fitzgerald, J. E., Z. Pan, M. Sudibandriyo, R. L. Robinson, Jr. and K. A. M. Gasem. "Modeling of Supercritical Adsorption of Gas Mixtures Using the Simplified Local Density Framework." Presented at the AIChE Annual Meeting, San Francisco, CA, November 16-21, 2003.
126. Neely, B., S. S. Godavarthy, R. L. Robinson, Jr. and K. A. M. Gasem. "Modeling of Infinite-Dilution Activity Coefficients of Aqueous Systems." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Houston, Texas, November 11-14, 2003.
127. Barfield, B. and K. A. M. Gasem. "Sediment Control with Slit Fence on Pipeline Construction." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Houston, Texas, November 11-14, 2003.
128. Gasem, K. A. M. and B. Barfield. "Slit Fence - Problems and Prospects from Industry Viewpoint." Presented at the Tenth International Petroleum Environmental Consortium (IPEC) Conference, Houston, Texas, November 11-14, 2003.
129. Gasem, K. A. M., Z. Pan, J. E. Fitzgerald, M. Sudibandriyo and R. L. Robinson, Jr. "Modeling of High-Pressure Adsorption." Presented at Oak Ridge National Laboratory, Chemical Science Division, Oak Ridge, TN, May 29, 2003.
130. Gasem, K. A. M. "Energy/Environment Balance." Presented at the Stillwater Rotary Club, Stillwater, OK, April 24, 2003.
131. Godavarthy, S. S., A. K. Gasem, R. L. Robinson, Jr. and K. A. M. Gasem. "Improved Models for Pure Property Predictions Using Quantitative Structure Property Relationships and Artificial Neural Networks." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 31- April 3, 2003.
132. Fitzgerald, J. E., Z. Pan, M. Sudibandriyo, R. L. Robinson, Jr. and K. A. M. Gasem "Modeling the Adsorption of Methane, Carbon Dioxide, Nitrogen and their Binary

- Mixtures on Activated Carbon Using the Simplified Local Density Model." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 31-April 3, 2003.
133. Pan, Z., J. E. Fitzgerald, M. Sudibandriyo, R. L. Robinson, Jr. and K. A. M. Gasem. "Two-Dimensional Equation-of-State Modeling for Mixture Adsorption." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 31-April 3, 2003.
 134. Sudibandriyo, M., J. E. Fitzgerald, Z. Pan, R. L. Robinson, Jr. and K. A. M. Gasem. "Extension of the Ono-Kondo Lattice Model to High-pressure Mixture Adsorption." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 31-April 3, 2003.
 135. Gasem, K A. M., Z. Pan, J. E. Fitzgerald, M. Sudibandriyo and R. L. Robinson, Jr. "Adsorption Modeling Update." Presented at the DOE Sponsored Second International Forum on Geologic Sequestration of CO₂ in Deep, Unminable Coalseams - Coal-Seq II., Washington D. C., March 6-7, 2003.
 136. Goodman, A., K. A. M. Gasem, and others. "Department of Energy Round Robin: CO₂ Adsorption on Selected Coals." Presented at the DOE Sponsored Second International Forum on Geologic Sequestration of CO₂ in Deep, Unminable Coalseams - Coal-Seq II., Washington D. C., March 6-7, 2003.
 137. Pan, Z., M. Sudibandriyo, J. E. Fitzgerald, R. L. Robinson, Jr. and K. A. M. Gasem, "Equilibrium Models for Coalbed Methane Production and CO₂ Sequestration." Presented at the 2002 International Petroleum Environmental Consortium (IPEC) Conference, Albuquerque, New Mexico, October 21-25, 2002.
 138. Gasem, K A. M. "The Integrated Petroleum Environmental Consortium." Presented at the Gulf Coast Environmental Alliance Group Meeting, Houston, Texas, July 11, 2002.
 139. Gasem, K A. M., Z. Pan, J. E. Fitzgerald, M. Sudibandriyo and R. L. Robinson, Jr. "Modeling of Coalbed Gases." Presented at the DOE Sponsored First International Forum on Geologic Sequestration of CO₂ in Deep, Unminable Coalseams - Coal-Seq I., Houston, Texas, March 14-15, 2002.
 140. Gasem, K A. M., J. E. Fitzgerald, M. Sudibandriyo, Z. Pan and R. L. Robinson, Jr. "Measurement and Modeling of Coalbed Gases." Presented at the 2002 Annual Convention of American Association of Petroleum Geologists (AAPG), Houston, Texas, March 10-13, 2002.
 141. Gasem, K A. M., M. Sudibandriyo, J. E. Fitzgerald, Z. Pan and R. L. Robinson, Jr. "Measurement and Modeling of Gas Adsorption on Selected Coalbeds." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 10-16, 2002.
 142. Gasem, K A. M., Y. Sofyan and A. J. Ghajar. "A Systematic Method to Predict Cloud Point Temperature and Solid Precipitation." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 10-16, 2002.
 143. Godavarthy, S. S., K. A. M. Gasem and R. L. Robinson, Jr. "QSPR Approach for Melting Point Prediction." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 10-16, 2002.
 144. Gasem, K A. M., J. E. Fitzgerald, Z. Pan, M. Sudibandriyo and R. L. Robinson, Jr. "Modeling of Gas Adsorption on Coals." Presented at the Eighteenth Annual International Pittsburgh Coal Conference, Newcastle, Australia, December 3-7, 2001.

145. Gasem, K A. M., J. E. Fitzgerald, Z. Pan, M. Sudibandriyo and R. L. Robinson, Jr. "Models for Coalbed Methane Production and CO₂ Sequestration." Presented at the Seventh International Petroleum Environmental Conference, Albuquerque, NM, November 5-7, 2001.
146. Gasem, K A. M., S. S. Godavarthy and R. L. Robinson, Jr. "Predicting Vapor Densities of Refrigerants Using the SVRC Framework." Presented at the Seventh International Petroleum Environmental Conference, Albuquerque, NM, November 5-7, 2001.
147. Gasem, K A. M., Y. Sofyan and A. J. Ghajar. "An Improved Algorithm for Multiphase Calculations." Presented at the AIChE Spring National Meeting, Houston, Texas, April 22-26, 2001.
148. Gasem, K A. M., J. E. Fitzgerald, Z. Pan, M. Sudibandriyo and R. L. Robinson, Jr. "Modeling the Adsorption of CO₂, Methane and Nitrogen in Coalbeds." Presented at the AIChE Spring National Meeting, Houston, Texas, April 22-26, 2001.
149. Gasem, K A. M., N. Trivedi and R. L. Robinson, Jr. "An Amended Framework for Vapor-Liquid Equilibrium Calculations." Presented at the AIChE Spring National Meeting, Houston, Texas, April 22-26, 2001.
150. Gasem, K A. M., J. E. Fitzgerald and R. L. Robinson, Jr. "Sequestering Carbon Dioxide in Coalbeds." Presented at the Alberta Research Council Meeting, Calgary, Alberta, Canada, June 28, 2000.
151. Gasem, K. A. M., A. Rahaman, W. Turbury, C. Schult and R. L. Robinson, Jr. "Predicting Trace Concentrations of Organic Compounds in Water Using QSPR Models." Presented at the Sixth International Petroleum Environmental Conference, Albuquerque, NM, November 7, 2000.
152. Gasem, K. A. M., B. Neely, D. Ratzlaff, J. Wagner and R. L. Robinson, Jr. "Mutual Solubilities of Hydrocarbon-Water Systems." Presented at the Sixth International Petroleum Environmental Conference, Albuquerque, NM, November 7, 2000.
153. Sofyan, Y., A. J. Ghajar and K. A. M Gasem. "Cloud Point Temperature Prediction." Presented at AIAA/ASME Oklahoma Symposium, Stillwater, Oklahoma, November 6, 2000.
154. Gasem, K. A. M., C. Schult, and R. L. Robinson, Jr. "Design of Improved Solvents for Extractive Distillation." Presented at the University of Tulsa, Tulsa, OK, April 20, 2000.
155. Gasem, K. A. M., and R. L. Robinson, Jr. "Sequestrating Carbon Dioxide in Coalbeds." Presented at the BP Amoco Complex, Naperville, Illinois, April 11, 2000.
156. Gao, W., R. L. Robinson, Jr. and K. A. M. Gasem. "Improved Correlations for Heavy n-Paraffin Physical Properties." Presented at the AIChE Spring National Meeting, Atlanta, Georgia, March 5-9, 2000.
157. Gao, W., K. A. M. Gasem and R. L. Robinson, Jr. "A Modified Temperature Dependence for the Peng-Robinson Equation of State." Presented at the AIChE Spring National Meeting, Atlanta, Georgia, March 5-9, 2000.
158. Wagner, J. K. A. M. Gasem and E. Maase. "Gas Processors Association Thermodynamic Database." Presented at the GPA Annual Meeting, Atlanta, Georgia, March 10-15, 2000.

159. Schult, C., B. J. Neely, K. A. M. Gasem, R. L. Robinson, Jr. and B. A. Todd. "Infinite-Dilution Activity Coefficients of Selected Solutes in Sulfolane, Propylene Carbonate and N-Formylmorpholine." Presented at the AIChE Annual Meeting, Dallas, Texas, October 31-November 5, 1999.
160. Neely B. J., C. Schult, K. A. M. Gasem, R. L. Robinson, Jr. and B. A. Todd. "Process Simulation of Cyclohexane Purification by Extractive Distillation." Presented at the AIChE Annual Meeting, Dallas, Texas, October 31-November 5, 1999.
161. Ratzlaff, D. W., K. A. M. Gasem, R. L. Robinson, Jr. and Jan Wagner. "Mutual Solubilities of Hydrocarbon-Water Systems." Presented at the AIChE Annual Meeting, Dallas, Texas, October 31-November 5, 1999.
162. Achour, M. H., C. Schult and K. A. M. Gasem. "A New Method to Assess the Environmental Risk of a Given Industrial Process." Proceedings of the Fifth International Petroleum Environmental Conference, Houston, TX, November 16-18, 1999.
163. Gasem, K. A. M., R. L. Robinson, Jr., M. M. Johnson and A. Schaffer. "The Economic Impact of Applied Research." Presented to the OCAST Board of Directors, Oklahoma City, Oklahoma, March 30, 1999.
164. Gasem, K. A. M., W. Gao and R. L. Robinson, Jr. "The Modified Park-Gasem-Robinson Equation of State." Presented at the AIChE Spring National Meeting, Houston, Texas, March 14-18, 1999.
165. Gao, W., K. A. M. Gasem and R. L. Robinson, Jr. "Experimental Measurements and Equation-of-State Representation of Asymmetric Mixtures." Presented at the AIChE Spring National Meeting, Houston, Texas, March 14-18, 1999.
166. Gasem, K. A. M. and J. Wagner. "Enthalpy and VLE Database Development and Maintenance." Presented to the GPA Enthalpy and Equilibrium Steering Committees, Nashville, Tennessee, February 29, 1999.
167. Gasem, K. A. M. and R. L. Robinson, Jr. "Sequestering Carbon Dioxide in Coalbeds." Presented at the Alberta Research Council Meeting, Calgary, Alberta, Canada, February 5, 1999.
168. Gasem, K. A. M., C. Schult and R. L. Robinson, Jr. "Predicting Phase Densities of Refrigerants Using the SVRC Correlating Framework." Presented at the Fifth International Petroleum Environmental Conference, Albuquerque, NM, October 20-24, 1998.
169. Gasem, K. A. M., C. Schult and R. L. Robinson, Jr. "Predicting Trace Concentrations of Organic Compounds in Water." Presented at the Fifth International Petroleum Environmental Conference, Albuquerque, NM, October 20-24, 1998.
170. Gasem, K. A. M., R. Bandorwalla and R. L. Robinson, Jr. "Process Simulation: Effectiveness vs. Efficiency." Presented at Central Oklahoma AIChE Section Meeting, Ponca City, OK, December 10, 1998.
171. Gasem, K. A. M., R. Bandorwalla and R. L. Robinson, Jr. "Process Simulation: Effectiveness vs. Efficiency." Presented at Central Oklahoma AIChE Section Meeting, Stillwater, OK, October 10, 1998.
172. Gasem, K. A. M. and R. L. Robinson, Jr. "Phase Behavior Modeling." Presented at the Energy Institute, Tripoli, Libya, January 1998.

173. Gasem, K. A. M. and R. L. Robinson, Jr. "Invited Lectures on Phase Behavior Modeling." Presented at Alfatah University, Tripoli, Libya, May-June, 1998.
174. Gasem, K. A. M. and R. L. Robinson, Jr. "Prediction Saturation Properties Using the SVRC Correlating Framework." Presented at Alfatah University, Tripoli, Libya, June 1998.
175. Gao, W., K. A. M Gasem and R. L. Robinson, Jr. "Phase Behavior of Light Gases in Hydrocarbon and Aqueous Solvents." Presented at the U.S. Department of Energy University Contractors' Meeting, Pittsburgh, Pennsylvania, June 1998.
176. Gasem, K. A. M., K. S. Chunang, K. C. Row and R. L. Robinson, Jr. "Predicting Calorimetric Properties Using the Original and the Modified SPHCT EOS." Presented at the AIChE Annual Meeting, Chicago, IL, November 10-15, 1996.
177. Gasem, K. A. M., S. Raghunathan, M. S. Bader and R. L. Robinson, Jr. "Predicting the Phase Behavior of Six Supercritical Fluids." Presented at the AIChE Annual Meeting, Chicago, IL, November 10-15, 1996.
178. Gao, W., K. A. M. Gasem and R. L. Robinson, Jr. "Coalbed Gas Adsorption Using Two-Dimensional Equations of State and the Simplified-Local-Density Model." Presented at the AIChE Annual Meeting, Chicago, IL, November 10-15, 1996.
179. Gasem, K A. M., D. Twomey, C. Schult and R. L. Robinson, Jr. "Prediction of Vapor Pressure of Refrigerants Using the SVRC Correlating Framework." Presented at the Third International Petroleum Environmental Conference, Albuquerque, NM, September 24-27, 1996.
180. Gasem, K A. M., N. Kamal and M. S. High. "The Thermodynamic Performance of Non-Azeotropic Refrigerant Mixtures." Presented at the Third International Petroleum Environmental Conference, Albuquerque, NM, September 24-27, 1996.
181. Gasem, K A. M., D. Twomey, C. Schult and R. L. Robinson, Jr. "Prediction of Vapor Pressure of Refrigerants Using the SVRC Correlating Framework." Presented at the 50th AIChE Tri-Sectional Meeting, Bartlesville, OK, March 27, 1996.
182. Bader, M. S. and K. A. M. Gasem. "Treatment of Produced Water in Petroleum Production." Presented at the Third International Petroleum Environmental Conference, Albuquerque, NM, September 24-27, 1996.
183. Gao, W., K. A. M. Gasem and R. L. Robinson, Jr. "Adsorption of Pure Methane, Nitrogen and Carbon Dioxide and Their Binary Mixtures on Wet Fruitland Coal." Presented at the 50th AIChE Tri-Sectional Meeting, Bartlesville, OK, March 27, 1996.
184. Gasem, K A. M., R. D. Shaver and D. Twomey. "Utilization of Carbon Dioxide for Environmental and Economic Benefits." Presented at the Second International Petroleum Environmental Conference, New Orleans, LA, September 25-27, 1995.
185. Bader, M. S. and K. A. M. Gasem. "Prediction of Phase Behavior, Henry's Constants, and Infinite-Dilution Partial Molar Volumes for Carbon Dioxide and Carbon Monoxide in n-Paraffins." Presented at the Third Italian Conference on Supercritical Fluids and their Applications, September 3-6, 1995, Trieste, Italy
186. Gasem, K A. M. "Analysis of Equilibrium Data for Oxygenates." Presented at the Research and Development Center of Phillips Petroleum, Bartlesville, OK, September 19, 1995.

187. Gasem, K. A. M., R. L. Robinson, Jr., J. Yadavalli and B. J. Neely. "Development of New Solvents for Extractive Distillation: Fifth Progress Report." Presented at the Research and Development Center of Phillips Petroleum, Bartlesville, OK, September 19, 1995.
188. Gasem, K. A. M., R. L. Robinson, Jr., J. Yadavalli and B. J. Neely. "Development of New Solvents for Extractive Distillation: Fourth Progress Report." Presented at the Research and Development Center of Phillips Petroleum, Bartlesville, OK, March 28, 1995.
189. Whiteley, J. R., C. Zhou, E. A. Misawa and K. A. M. Gasem. "Process Control Using Uniform Singular Value LQG/LTR." Presented at the American Control Conference, Seattle, WA, March 5, 1995.
190. Becker, D. E., J. N. Veenstra, A. J. Johannes and K. A. M. Gasem. "Regeneration of Granular Activated Carbon Containing Benzene with Natural Gas." Presented at the 50th Purdue University Industrial Waste Management, West Lafayette, IN, June 10, 1995.
191. Johannes, A. J., D. E. Becker, J. N. Veenstra and K. A. M. Gasem. "Natural-Gas Generation of Granular Activated Carbon." Presented at the 5th Annual WERC Technology Development Conference, Las Cruces, NM, April 18, 1995.
192. Gasem, K. A. M., J. Wagner and M. S. High. "Enthalpy Database Development and Maintenance." Presented to the GPA Enthalpy Steering Committee, New Orleans, LA, March 5, 1995.
193. Wagner, J., K. A. M. Gasem and M. S. High. "VLE Database Development and Maintenance." Presented to the GPA Equilibrium Steering Committees, New Orleans, LA, March 5, 1995.
194. Hall, F., C. Zhou, K. A. M. Gasem and R. L. Robinson, Jr. "Adsorption of Pure Methane, Nitrogen, Carbon Dioxide and Their Mixtures on Wet Fruitland Coal." Presented at the 1994 SPE Eastern Regional Conference, Charleston, WV, November 8, 1994.
195. Gasem, K. A. M. "MTBE/ETBE/TAME Equilibrium Data Analysis." Presented at the Research and Development Center of Phillips Petroleum, Bartlesville, OK, September 30, 1994.
196. Wagner, J., K. A. M. Gasem and M. S. High. "Enthalpy and VLE Database Development and Maintenance." Presented to the GPA Enthalpy and Equilibrium Steering Committees, Tulsa, OK, September 12, 1994.
197. Shaver, R. D. and K. A. M. Gasem. "Modified SPHCT EOS for Improved Predictions of Equilibrium and Volumetric Properties of Pure Fluids." Presented at the 12th Thermophysical Properties Symposium, Boulder, CO, June 12, 1994.
198. Gasem, K. A. M., M. S. High and J. Wagner. "Enthalpy Database Development and Maintenance." Presented at the GPA Enthalpy Committee Meeting, New Orleans, LA, March 5, 1994.
199. Gasem, K. A. M. "Wastewater Treatment." Presented at the Central Oklahoma AIChE Meeting, Stillwater, OK, January 1, 1993.
200. Bader, M. S. and K. A. M. Gasem. "Prediction of Infinite-dilution Activity Coefficients for Hydrocarbons in Aqueous Solutions." Presented at AIChE Annual Meeting, St. Louis, MO, November 8, 1993.

201. Zhou, C., K. A. M. Gasem, F. Hall and R. L. Robinson, Jr. "Correlation and Prediction of Gas Physical Adsorption." Presented at AIChE Annual Meeting, St. Louis, MO, November 8, 1993.
202. Gasem, K. A. M. and R. L. Robinson, Jr. "Equilibrium and Volumetric Data and Model Development for Coal Fluids." Presented at the U. S. Department of Energy, University Committee Meeting, Pittsburgh, PA, June 1993.
203. Park, J. K., R. L. Robinson, Jr. and K. A. M. Gasem. "Prediction of the Solubilities of Methane, Ethane, Carbon Dioxide and Carbon Monoxide in n-Paraffins Using the SPHCT Equation of State." Presented at the AIChE Spring National Meeting, Houston, March 29, 1993.
204. Zhou, C., K. A. M. Gasem, F. Hall and R. L. Robinson, Jr. "Predicting Gas Adsorption Using Two-Dimensional Equations of State." Presented at the AIChE Annual Meeting, Houston, TX, November 1993.
205. Gasem, K. A. M. and R. L. Robinson, Jr. "G&P for Calculating Thermophysical and Equilibrium Properties." Presented at the AIChE Annual Meeting, Miami, FL, November 1992.
206. Gasem, K. A. M. "Environmental Feasibility: An Engineering Requirement." Presented at the AIChE Annual Meeting, Miami, FL, November 1992.
207. Robinson, Jr., R. L. and K. A. M. Gasem. "Equilibrium and Volumetric Data and Model Development for Coal Fluids." Presented at the U. S. Department of Energy, University Committee Meeting, Pittsburgh, PA, June 1992.
208. Gasem, K. A. M. "Studies in Phase Equilibria Thermodynamics." Presented at the Department of Chemistry, Oklahoma State University, Stillwater, OK, April 1992.
209. Gasem, K. A. M., K. V. Keerthikumer and R. L. Robinson, Jr. "GEOS for Calculating Volumetric and Equilibrium Properties." Presented at the AIChE Annual Meeting, Los Angeles, CA, November 1991.
210. Gasem, K. A. M. and M. Achour. "Environmental Feasibility: An Engineering Requirement." Presented at the All African Conference, Stillwater, Oklahoma, May 1991.
211. Gasem, K. A. M. "Fundamental and Applied Aspects of Low-Pressure CVD Diamond Synthesis." Presented at School of Chemical Engineering, Oklahoma State University, Stillwater, OK, January 1991.
212. Gasem, K. A. M. and R. L. Robinson, Jr. "Correlation of Saturation Properties Using Scaled Variable Reduced Coordinate Approach." Presented at the 11th Thermophysical Properties Symposium, Boulder, CO, June 1991.
213. Gasem, K. A. M. "Process Fluid-Phase Equilibria." Presented at McNeese State University, Lake Charles, LA, February 1990.
214. Gasem, K. A. M. "Graduate School: To Go or Not to Go." Presented at the University of Tulsa, OK, April 1990.
215. Gasem, K. A. M., K. M. Khalaf and R. L. Robinson, Jr. "A Framework for the Prediction of Saturation Properties: Interfacial Tension Predictions." Presented at 40th Canadian Chemical Engineering Conference, Halifax, Canada, July 1990.

216. Gasem, K. A. M., P. B. Dulcamara, K. B. Dickson and R. L. Robinson, Jr. "Test of Prediction Methods for Interfacial Tensions of CO₂ and Ethane in Hydrocarbon Solvents." Presented at 5th International Conference on Fluid Properties and Phase Equilibria for Chemical Process Design, Banff, Canada, April 1989.
217. Gasem, K. A. M. and R. L. Robinson, Jr. "Evaluation of the Simplified-Perturbed-Hard-Chain Theory (SPHCT) for Prediction of Phase Behavior of n-Paraffins and Mixtures of n-Paraffins with Ethane." Presented at AIChE Spring National Meeting, Houston, Texas, April 1989.
218. Gasem, K. A. M. and R. L. Robinson, Jr. "Prediction of Phase Behavior for Ethane and CO₂ in Heavy Normal Paraffins Using Generalized-Parameter Soave and Peng-Robinson Equations of State." Presented at AIChE Annual Meeting, Washington, D.C., November 1988.
219. Gasem, K. A. M. and R. L. Robinson, Jr. "Phase Equilibrium Data for Development of Correlations for Coal Fluids." U.S. Department of Energy, University Contractors' Meeting, Pittsburgh, Pennsylvania, July 1988.
220. Gasem, K. A. M. and H. M. Qabazard. "The Effect of Catalyst Wetting on Trickle-Bed Reactor Performance." Presented at the AIChE Spring National Meeting, New Orleans, Louisiana, March 7, 1988.
221. Gasem, K. A. M. and R. L. Robinson, Jr. "Prediction of CO₂ Solubility Using Generalized-Parameter Cubic Equations of State (323 to 511K - 0.5 to 10 MPa)." Presented at AIChE Spring National Meeting, Houston, Texas, March 27, 1985.

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