



Basim Abu-Jdayil

Professor of Chemical Engineering

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Personal Data

- Nationality: Jordanian.
- Family status: Married, five children.

Experience

UNITED ARAB EMIRATES UNIVERSITY– Al Ain, UAE Professor Chemical & Petroleum Engineering Department	2011 – Present
UNITED ARAB EMIRATES UNIVERSITY– Al Ain, UAE Associate Professor Chemical & Petroleum Engineering Department	2006 – 2011
UNIVERSITY OF BAHRAIN, Bahrain Associate Professor Chemical Engineering Department	2004 – 2006
JORDAN UNIVERSITY OF SCIENCE & TECHNOLOGY Irbid, Jordan Associate Professor Chemical Engineering Department	2003 – 2004
JORDAN UNIVERSITY OF SCIENCE & TECHNOLOGY Irbid, Jordan Assistant Professor Chemical Engineering Department	1998 – 2003
JORDAN UNIVERSITY OF SCIENCE & TECHNOLOGY Irbid, Jordan Full Time Lecturer Chemical Engineering Department	1997 – 1998
FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG, Erlangen, Germany Research Assistant Department of Fluid Mechanics (LSTM)	1992 – 1996

LULUA SPINNING AND WEAVING FACTORY, Amman. Jordan Process Engineer	1991 – 1992
UNIVERSITY OF JORDAN, Amman, Jordan Teaching Assistant Chemical Engineering Department	1989 – 1991
UNIVERSITY OF JORDAN, Amman, Jordan Teaching Assistant Chemistry Department	1988 – 1989

Education

FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG, Erlangen, Germany PhD in Chemical Engineering Department of Fluid Mechanics (LSTM) Thesis title: <i>Electrorheological Fluids in Rotational Couette Flow, Slit Flow and Torsional Flow (Clutch).</i>	1996
UNIVERSITY OF JORDAN, Amman, Jordan MSc in Chemical Engineering Thesis title: <i>Desulfurization of Jordanian Oil Shale.</i>	1991
JORDAN UNIVERSITY OF SCIENCE & TECHNOLOGY Irbid, Jordan BSc in Chemical Engineering Project: <i>Heat Transfer from a Heating Helical Coil in a Propeller-Agitated Vessel.</i>	1988

RESEARCH AND SCHOLARLY ACTIVITIES

69 peer-reviewed journal papers, 1 patent and a lot of presentations in local & international conferences.
H-index = 22, Citation = 1414, http://scholar.google.com/citations?user=Wy_TJiEAAA&hl=en

Patents

Abu-Jdayil, B., AHI Mourad. Thermal Insulation Material. US Patent 9347216; May 24, 2016.

Books

Abu-Jdayil, B., *Electrorheological Fluids in Rotational Couette Flow, Slit Flow and Torsional Flow (Clutch)*, Shaker Verlag, Aachen, Germany, 1996, ISBN 3-8265-2027-0, ISSN 0945-2230.

Articles in Refereed Journals

1. **Abu-Jdayil B.**, A-H. Mourad, and A. Hussain. 2016. "Investigation on the mechanical behavior of polyester-scrap tire composites", *Construction and Building Materials*, 127, 896–903.

2. Mourad, Abdel-Hamid I., Omar G. Ayad, Ashfakur Rahman, Ali Hilal-Alnaqbi, and **Basim Abu-Jdayil**. "Experimental Investigation of Kevlar KM2Plus Nano-Reinforced Laminated Composite Thermo-Mechanical Properties." In ASME 2016 Pressure Vessels and Piping Conference, pp. Vo6ATo6A030-Vo6ATo6A030. American Society of Mechanical Engineers, 2016.
3. **Abu-Jdayil B.**, A-H. Mourad, and A. Hussain. 2016. "Thermal and physical characteristics of polyester–scrap tire composites", *Construction and Building Materials*, 105, 472–479.
4. **Abu-Jdayil B.**, M. Ghannam, and M. S. Nasser. 2016. "The Modification of Rheological Properties of Bentonite-Water Dispersions with Cationic and Anionic Surfactants," *International Journal of Chemical Engineering and Applications* vol. 7, no. 2, pp. 75-80.
5. S-A. B. Al-Omari, Q. M. Al-Mdallal, Y. El-Khatib, and **B. Abu-Jdayil**. 2015. "The Role of Mathematics Courses in the Assessment Process of Engineering ABET-Outcomes," *Education Research International*, vol. 2015, Article ID 735325, 13 pages. doi:10.1155/2015/735325
6. **Abu-Jdayil B.** and M. Ghannam. 2014. The Modification of Flow Behavior of Sodium Bentonite – Water Dispersions with Low Viscosity CMC-Na Polymer. *Energy Sources Part A: Recovery, Utilization, and Environmental Effects*, 36, 1037-1048.
7. Mamdouh T. Ghannam, **Basim Abu-Jdayil**, and Nabil Esmail. 2014. Experimental Investigation of Crude Oil–Xanthan Emulsions Flow Behavior. *Journal of Petroleum Science Research (JPSR)*, 3: 1-15.
8. **Abu-Jdayil, B.**, Nasser, M. S., Ghannam, M. 2013. Structure Breakdown of Stirred Yoghurt in a Circular Pipe as Affected by Casein and Fat Content. *FOOD SCIENCE AND TECHNOLOGY RESEARCH*, 19(2), 277-286.
9. Ghannam, M., **B. Abu-Jdayil** and N. Esmail. 2013. Flow Behavior Comparison of Xanthan and Alcoflood Polymers Aqueous Solutions. *American Journal of Oil and Chemical Technologies*, 1(2): 1 – 11.
10. **Abu-Jdayil B.** 2013. Response time of an ER-fluid under shear and flow modes. *Journal of Physics: Conf. Ser.*, 412: 012009.
11. **Abu-Jdayil B.**, S.-A. B. Al Omari. 2013. Rheological Behavior of Bentonite-Polyester Dispersions. *Mechanics of Composite Materials* 49: 277-284.
12. **Abu-Jdayil B.** and D. Abu-Fara. 2013. Modification of the Rheological Behavior of Sodium Alginate by Chitosan and Multivalent Electrolytes. *Italian J. of Food Science*, 25: 196 - 201.
13. Al Omari, S.-A. B. and **B. Abu-Jdayil**. 2013. Some considerations of the performance of small dual fuel furnaces fueled with a gaseous fuel and a liquid fuel mix containing used engine lube oil. *Renewable Energy* 56: 117-122.
14. **Abu-Jdayil B.**, M. A. Al-Nakoua, M. H. El-Naas, and A. Khaleel. 2012. Rheological characteristics of nickel–alumina sol–gel catalyst. *Fuel Processing Technology*, 102: 85-89.
15. Ghannam M. T., S. W. Hasan, **B. Abu-Jdayil** and N. Esmail. 2012. Rheological properties of heavy & light crude oil mixtures for improving flowability. *Journal of Petroleum Science and Engineering*, 81: 122–128.
16. Nakou M., M. Elnaas, and **B. Abu-Jdayil**. 2011. Characterization and Testing of Sol-Gel Catalysts prepared as thin layers in a Plate Reactor, *Fuel Processing Technology*, 92: 1836-1841.
17. **Abu-Jdayil B.**, S.A. Al-Omari, H. Taher and L. Al-Nuaimi. 2011. Rheological Characterization of Clay-Polyester Composites, *Procedia Engineering* 10: 716-721.
18. **Abu-Jdayil, B.** 2011. Rheology of Sodium and Calcium Bentonite–Water Dispersions: Effect of Electrolytes and Aging Time, *International J. of Mineral Processing*, 98:208-213.

19. Al-Attar, H. and **B. Abu-Jdayil**. 2011. "Outcomes Assessments of Petroleum Engineering Program at the United Arab Emirate University: A Systematic Approach", *Journal of Advances in Sustainable Petroleum Engineering Science (ASPES)*, 2: 47-68.
20. Qiblawey, H. and **B. Abu-Jdayil**. 2010. "Viscosity and Density of Ternary Solution of Magnesium Chloride + Sodium Chloride + Water from 298.15 K to 318.15 K", *Journal of Chemical & Engineering Data*, 55, 3322–3326.
21. **Abu-Jdayil, B.**, H. Al-Attar. 2010. "Curriculum Assessment as a Direct Tool in ABET Outcomes Assessment in Chemical Engineering Program", *European Journal of Engineering Education*, 35: 489-505.
22. Al Omari, S.-A. B., Y. Haik and **B. Abu-Jdayil**. 2010. "Flow Characterization of Gallium in a Meso-Scale Channel under the Influence of Magnetic Field", *International Communications in Heat and Mass Transfer*, 37: 1127–1134
23. **Abu-Jdayil, B.**, F. Banat and M. Al-Sameraiy. 2010. "Steady Rheological Properties of Rotating Biological Contactor (RBC) Sludge", *J. of Water Resource and Protection (JWARP)*, 2: 1-7.
24. **Abu-Jdayil, B.**, and K. Al-Malah. 2008. "Jordanian Clay-Based Heat Insulator Composites: Mechanical Properties," *J. of Reinforced Plastics and Composites*, 27: 1559-1568.
25. **Abu-Jdayil, B.**, H. A. Mohameed and A. Bsoul. 2008. "Determination of Optimal Dead Sea Salt Content in Cosmetic Emulsion Using Rheology and Stability Measurements", *Journal of Cosmetic Science*, 59: 1-14.
26. Al-Malah, K. and **B. Abu-Jdayil**. 2007. "Clay-based heat insulator composites: Thermal and water retention properties", *Applied Clay Science* 37: 90-96.
27. Brunn, P.O., and **B. Abu-Jdayil**. 2007. "Axial annular flow of plastic fluids: dead zones and plug-free flow", *Rheologica Acta* 46: 449-454.
28. **Abu-Jdayil, B.**, H. Asoud, and P.O. Brunn. 2007. "Effect of Polymer Coating on the Behavior of an Electrorheological Fluid in Slit Flow", *Materials & Design* 28: 928-940.
29. Mohameed, H. A., **B. Abu Jdayil** , and K. Takrouiri. 2007. "Separation of para-xylene from xylene mixture via crystallization", *Chemical Engineering & Processing* 46: 25-36.
30. **Abu-Jdayil, B.** and H. A. Mohameed. 2006 "Facial Mask Comprising Dead Sea Mud", *Journal of Cosmetic Science* 57: 441-454.
31. Mohameed, H., **B. Abu-Jdayil**, and A. Eassa, 2006. "Flow properties of corn starch–milk–sugar system prepared at 368.15 K", *J. of Food Engineering* 77: 958-964.
32. **Abu-Jdayil, B.** and H. A. Mohameed. 2004 "Rheology of Dead Sea Shampoo Containing the Antidandruff Climbazole", *International Journal of Cosmetic Science* 26: 281-289.
33. **Abu-Jdayil, B.**, F. Banat, R. Jumah, S. Al-Asheh and S. Hammad. 2004. "A Comparative Study of Rheological Characteristics of Tomato Paste and Tomato Powder Solutions", *International J. of Food Properties* 7: 483-497.
34. **Abu-Jdayil, B.** 2004. "Flow Properties of Sweetened Sesame Paste (Halawa Tehineh)", *European Food Research and Technology* 219: 265-272.
35. **Abu-Jdayil, B.**, H. A. Mohameed, M. Sa'id and T. Snobar, 2004. "Rheology and Storage Tests of Dead Sea Shampoo", *Applied Rheology* 14: 96-103.
36. **Abu-Jdayil, B.**, H. Mohameed and A. Eassa, 2004. "Rheology of Wheat Starch-Milk-Sugar Systems: Effect of Starch Concentration, Sugar Type and Concentration, and Milk Fat Content, *J. of Food Engineering* 64: 207-212.
37. Brunn, P.O. and **B. Abu-Jdayil**, 2004. "A Phenomenological Model of Electrorheological Fluids", *Rheologica Acta* 43: 62-67.
38. **Abu-Jdayil, B.**, H. Mohameed and A. Eassa, 2004. "Rheology of Starch-Milk-Sugar Systems: Effect of Heating Temperature", *Carbohydrate Polymers* 55: 307-314.

39. **Abu-Jdayil, B.**, H. A. Mohameed, M. Sa'id and T. Snobar, 2004. "Rheological Characterization of Hair Shampoo in the Presence of Dead Sea Salt", *International J. of Cosmetic Science* **26**: 19-29.
40. **Abu-Jdayil, B.**, and H. Mohameed, 2004. "Time-Dependent Flow Properties of Starch-Milk-Sugar Pastes", *European Food Research and Technology* **218**: 123-127.
41. Mohameed, H., **B. Abu-Jdayil** and A. Al-Shawabkeh, 2004. "Effect of solids concentration on the rheology of Labneh (concentrated yogurt) produced from sheep milk", *J. of Food Engineering* **61**: 347-352.
42. **Abu-Jdayil, B.** 2003. "Modelling the time-dependent rheological behavior of semi-solid foodstuffs", *J. of Food Engineering* **57**: 97-102.
43. Shaker, R.R., **B. Abu-Jdayil**, R.Y. Jumah and S. Ibrahim, 2002. "Rheological Properties of Set Yogurt as Influenced by Incubation temperature and Homogenization," *J. of Food Quality* **25**: 409-418.
44. **Abu-Jdayil, B.** and P.O. Brunn, 2002. "Effect of electrode morphology on the behavior of ER-fluids in torsional flow", *J. of Intelligent Material Systems and Structures* **13**: 3-12.
45. **Abu-Jdayil, B.**, K. Al-Malah and R. Sawalha. 2002. "Study on Bentonite-Unsaturated Polyester Composite Materials," *J. of Reinforced Plastics and Composites* **21**: 1597-1610.
46. **Abu-Jdayil, B.** 2002. "Rheology of milled black cumin (*Nigella sativa* L.)", *Rheologica Acta* **41**: 441-447.
47. **Abu-Jdayil, B.**, R. R. Shaker and R. Y. Jumah, 2002. "Rheological Properties of a Concentrated Fermented Product, Labneh, Produced from Bovine Milk: Effect of Production Method" *International J. of Food Properties* **5**: 667-679.
48. Al-Asheh, S., **B. Abu-Jdayil**, A. Barakat and N. Abunasser, 2002. "Rheological characteristics of microbial suspensions of *Pseudomonas aeruginosa* and *Bacillus cereus*," *International J. of Biological Macromolecules* **30**: 67-74 .
49. **Abu-Jdayil, B.** and H. Mohameed, 2002. "Experimental and Modelling Studies of the Flow Properties of Concentrated Yogurt as Affected by the Storage Time," *J. of Food Engineering* **52**: 359-365.
50. Mohameed, H., **B. Abu-Jdayil** and M. El-Khateeb, 2002. "Effect of Cooling Rate on Unseeded Batch Crystallization of KCl," *Chemical Engineering and Processing* **41**: 297-302.
51. **Abu-Jdayil, B.**, A. Ghzawi, K. Al-Malah and S. Zaitoun, 2002. "Heat Effect on Rheology of Light- and Dark-Colored Honey," *J. of Food Engineering* **51**: 33-38.
52. **Abu-Jdayil, B.**, K. Al-Malah and H. Asoud, 2002. "Rheological Characterization of Milled Sesame (Tehineh)," *Food Hydrocolloids* **16**: 55-61.
53. Al-Malah, K., **B. Abu-Jdayil**, S. Zaitoun and A. Ghzawi, 2001. "Application of WLF and Arrhenius Kinetics to Rheology of Selected Dark Colored Honey," *J. of Food Process Engineering* **24**: 341-357.
54. Jumah, R.Y., **B. Abu-Jdayil** and R. R. Shaker, 2001. "Effect of Type and Level of Starter Culture on the Rheological Properties of Set Yogurt During Gelation Process," *International J. of Food Properties* **4**: 531-544.
55. Shaker, R.R., **B. Abu-Jdayil**, R.Y. Jumah and S. Ibrahim, 2001. "Rheological Properties of Set Yogurt during Gelation Process: Impact of Incubation Temperature," *Milchwissenschaft (Milk Science International)* **56**: 622-625.
56. **Abu-Jdayil, B.**, M. O. Azzam and K. Al-Malah, 2001. "Effect of Glucose and Storage Time on the Viscosity of Wheat Starch Dispersions," *Carbohydrate Polymers*, **46**: 207-215.
57. Jumah, R.Y., R. R. Shaker and **B. Abu-Jdayil**, 2001. "Effect of Milk Source on the Rheological Properties of Yogurt during Gelation Process," *International J. of Dairy Technology*, **54**: 89-93.

58. Zaitoun, A. Ghzawi, K. Al-Malah and **B. Abu-Jdayil**, 2001. "Rheological Properties of Selected Light Colored Jordanian Honey," *International J. of Food Properties*, **4**: 139-148.
59. Al-Malah, K., M. O. Azzam and **B. Abu-Jdayil**, 2000. "Effect of Glucose Concentration on the Rheological Behavior of Wheat Starch Dispersions," *Food Hydrocolloids*, **14**: 491-496.
60. **Abu-Jdayil, B.**, R. R. Shaker and R. Y. Jumah, 2000. "Rheological Behavior of Concentrated Yogurt (Labneh)," *International J. of Food Properties*, **3**: 207-213.
61. Shaker, R. R., R. Y. Jumah and **B. Abu-Jdayil**, 2000. "Rheological Properties of Plain Yogurt during Coagulation Process: Impact of Fat Content and Preheat Treatment," *J. of Food Engineering*, **44**: 175-180.
62. Brunn, P.O. and **B. Abu-Jdayil**, 1998. "Fluids with Transverse Isotropy as Models for Electrorheological Fluids," *Applied Mathematics and Mechanics (ZAMM)*, **78**: 97-107.
63. **Abu-Jdayil, B.** and P.O. Brunn, 1997. "Effects of Coating on the Behavior of Electrorheological Fluids in Torsional flow," *Smart Materials & Structures*, **6**: 509-520.
64. **Abu-Jdayil, B.** and P.O. Brunn, 1997. "Study of the Flow Behavior of Electrorheological Fluids at Shear- and Flow-Mode," *Chemical Engineering & Processing* **36**: 281-289.
65. Brunn, P.O. and **B. Abu-Jdayil**, 1996. "Fluide mit veraenderbaren Eigenschaften," *AGT DOKUMENTATION*, **25**: 60-64.
66. **Abu-Jdayil, B.** and P.O. Brunn, 1996. "Effects of Electrode Morphology on Slit Flow of an Electrorheological Fluid," *J. of Non-Newtonian Fluid Mechanics*, **63**: 45-61.
67. **Abu-Jdayil, B.** and P.O. Brunn, 1995. "Effects of Non-Uniform Electric Field on Slit Flow of an Electrorheological Fluid," *J. of Rheology*, **39**: 1327-1341.
68. **Abu-Jdayil, B.** and P.O. Brunn, 1994. "Optical Measurements of the Velocity Profile of an ER-Fluid in a Rectangular Conduit," *Applied Rheology*, **4**: 186-191.
69. **Abu-Jdayil, B.**, Y. Hamarneh and N. Haimour, 1993. "Oxydesulfurization of Jordanian Oil Shale," *Dirasat*, **20 B**: 143-164.

Presentations at Local & International Conferences

- Maissa Adi, Fatima Al Ghaferi, Sara Alyahyae, Maryam Aljabri, **Basim Abu-Jdayil**. Development of Polymeric Composite Material based on Bauxite Residue. UAEU Annual Research and Innovation Conference 2016, 27 - 29 November 2016, Al Ain, United Arab Emirates.
- **B. Abu-Jdayil**, K. B. Alsayyed Ahmed, M. Djama, M. Ghannam. The modifications of the rheological behaviour of Na-bentonite suspensions with chitosan biopolymer effect. 22nd International Congress of Chemical and Process Engineering CHISA 2016, 28-31 August, 2016, Prague / CZECH REPUBLIC.
- **Basim Abu-Jdayil**. Thermal Insulators Based on Local Fillers and Wastes. The First German-UAE Workshop on Energy and Water in the Gulf Cooperation Council Countries (EWGCC 2016), 12-14 April, 2016, RAK, UAE [Invited Speaker].
- **Basim Abu-Jdayil**, Abdel-Hamid Ismail Mourad, and Atif Hussain. Physical and mechanical properties of date palm wood fiber reinforced unsaturated polyester composites. 6th International Chemical and Environmental Engineering Conference (ICEEC-2015), 27-29 December 2015, Kuala Lumpur, Malaysia [Session Chair].
- **Basim Abu-Jdayil**, Abdel-Hamid Ismail Mourad, and Atif Hussain. Date Pits and Date Palm Wood-Based Heat Insulator Composites. UAEU Annual Research and Innovation Conference 2015, 24 - 25 November 2015, Al Ain, United Arab Emirates [Session Chair].
- **Basim Abu-Jdayil**, Abdel-Hamid Ismail Mourad, and Atif Hussain. DATE PITS AND DATE PALM WOOD-BASED HEAT INSULATOR COMPOSITES. 10th International Conference on Composite Science and Technology ICCST/10, September 2-4, 2015, Lisbon – Portugal.

- **Basim Abu-Jdayil**, Mamdouh Ghannam , M. S. Nasser. The Modification of Rheological Properties of Bentonite-Water Dispersions with Cationic and Anionic Surfactants. 4th International Conference on Chemical and Process Engineering (ICCPE 2015), June 15-16, 2015, Madrid – Spain [Session Chair]
- **Basim Abu-Jdayil**, Abdel-Hamid Ismail Mourad, and Atif Hussain. DATE PITS-BASED HEAT INSULATOR COMPOSITES. 9th International Materials Technology Conference & Exhibition, May 13-16, 2014, Kuala Lumpur – Malaysia.
- **Basim Abu-Jdayil**, Abdel-Hamid Ismail Mourad, and Atif Hussain. THERMAL INSULATION MATERIAL MADE OF DATE-PITS AND UNSATURATED POLYESTER. IMS/7 INTERNATIONAL CONFERENCE ON ADVANCES IN ENGINEERING MATERIALS, March 18-20, 2014, Sharjah – UAE [Session Chair].
- **Basim Abu-Jdayil**, Abdel-Hamid Ismail Mourad, and Muzamil Hassan. UTILIZATION OF LOCAL SHALL IN THERMAL INSULATION MATERIALS. IMS/7 INTERNATIONAL CONFERENCE ON ADVANCES IN ENGINEERING MATERIALS, March 18-20, 2014, Sharjah – UAE.
- **Basim Abu-Jdayil**, Abdel-Hamid Ismail Mourad, and Atif Hussain. SCRAP TIRES-BASED HEAT INSULATOR COMPOSITES, 12th International Conference on Frontiers of Polymers and Advanced Materials (12th ICFPAM, December 8 – 13, 2013, Auckland – New Zeland.
- **Abu-Jdayil B.**, and A.-H. I. Mourad. Utilization of Local Clay in Thermal Insulation Materials, Industrial Rocks and Construction Materials in the Arab World Symposium and Expo – 2013, January 7 – 9, 2013, Fujairah – UAE.
- **Abu-Jdayil B.** Response Time of an ER-fluid under Shear and Flow Modes, 13th International Conference on Electrorheological Fluids and Magnetorheological Suspensions (ERMR2012), July 2-6, 2012, Ankara – Turkey.
- **Abu-Jdayil B.**, F. Banat and M. Al-Sameraiy. Rheological Behavior of RBC Sludge at Different Steps of Treatment, The 2011 International Conference on Water, Energy, and The Environment (ICWEE2011), November 14-17, 2011, Sharjah-UAE.
- **Abu-Jdayil B.**, S.A. Al-Omari, H. Taher and L. Al-Nuaimi. Rheological Characterization of Clay-Polyester Composites, International Conference on the Mechanical Behavior of Materials (ICM 11), June 5-9, 2011, Como Lake, Italy.
- **Abu-Jdayil, B.**, H. Al-Attar, and M. Al-Marzouqi, Outcomes Assessment in Chemical and Petroleum Engineering Programs, 3rd International Symposium for Engineering Education (ISEE 2010), July 1-2, 2010, University College Cork, Ireland.
- Al-Attar, H., **B. Abu-Jdayil**, and M. Al-Marzouqi, Assessment of Educational Objectives in Chemical and Petroleum Engineering Programs, 3rd International Symposium for Engineering Education (ISEE 2010), July 1-2, 2010, University College Cork, Ireland.
- **Abu-Jdayil, B.**, Rheology of Bentonite–Water Systems: Effect of Natural Surfactants, Electrolytes and Aging Time, The Tenth Annual U.A.E. University Research Conference, April 13 - 16, 2009, Al Ain, UAE.
- **Abu-Jdayil, B.**, Rheological characterization of Alginate-based polymeric gels, The Ninth Annual U.A.E. University Research Conference, April 21-23, 2008, Al Ain, UAE.
- **Abu-Jdayil, B.**, Thixotropic behavior of milled black cumin (*Nigella sativa* L.), 6th European Conference on Rheology “eurheo 2002”, September 1-6, 2002, Erlangen, Germany.

- **Abu-Jdayil, B.** and P.O. Brunn, The behavior of electrorheological fluids in torsional flow, 3rd International Meeting of the Hellenic Society of Rheology, June 10 –14, 2001, Patras, Greece.
- **Abu-Jdayil, B.** and P.O. Brunn, Optical measurements of the velocity profile of an ER-fluid in a flat channel, 42nd Science Week (Laser Science and Applications), November 2 – 4, 2002, Aleppo, Syria.
- **Abu-Jdayil, B.,** Rheology of concentrated yogurt, .40th Science Week, November 4 – 9, 2000, El- Lathqeh, Syria.
- **Abu-Jdayil, B.** and P.O. Brunn, ER-clutches. Annual Meeting of the German Society of Process and Chemical Engineering, March 6 -8, 1996, Lahnstein, Germany.
- **Abu-Jdayil, B.** and P.O. Brunn, The behavior of an ER-fluid in slit flow, Annual Meeting of the German Society of Rheology, May 22 -23, 1995, Berlin, Germany.

Reports

- Evaluation of Opportunities for the Use of Seawater Neutralized Bauxite Residue in UAE Agriculture, Final Report submitted to MDC INDUSTRY HOLDING COMPANY LLC (MUBADALA) & DUBAI ALUMINIUM (DUBAL), UAE, September, 2014.
- Management of Calcium Hydroxide Slurry: Phase I; Characterization and Environmental Assessment, Final Report submitted to Emirates Industrial Gases Co. – ROC Engineering, Dubai, UAE, January 27, 2008.
- Waterproof Polymeric Heat Insulators Based on Local Fillers, Final Report submitted to The Higher Council for Science and Technology, Amman, Jordan, 2004.

Grants and Contracts

- Development of Polymeric Composite Material based on Bauxite Residue (SURE 2016; Undergraduate Summer Research Project)
- Deep desulfurization of liquid fuel in microchannels using deep eutectic solvents, 2016-2018 (UAEU-SQU grant).
- Thermoplastic Heat Insulators Based on Local Wastes, 2015 – 2017 (funded by UAE University, Center-based interdisciplinary grant)
- Evaluation of Opportunities for the Use of Seawater Neutralized Bauxite Residue in UAE Agriculture, 2013 – 2014 (funded by MUBADALA & DUBAL / UAE).
- Production of Polymeric Heat Insulators Based on Scrap-Tires and Date-pits, 2011-2014 (funded by NRF-UAE)
- Waterproof Polymeric Heat Insulators Based on Micronized and Nano-Sized Fillers, 2011 - 2014 (funded by UAE University)
- Utilization of Local (Sarooj) Clay in Drilling Mud: Phase I – Physical and Rheological Characterization, 2010 - 2011 (funded by UAE University).
- Rheological properties of bentonite-water system: Effect of electrolytes, 2008 - 2009 (funded by UAE University).
- Management of Calcium Hydroxide Slurry: Phase I; Characterization and Environmental Assessment, 2007 - 2008 (funded by Emirates Industrial Gas Co. ROC – Engineering, Dubai – UAE).
- Rheological characterization of Alginate-based polymeric gels, 2007 - 2008 (funded by UAE University).
- Batch crystallization of KCl: Estimation of kinetic parameters (funded by Jordan Univ. of Science & Technology).
- Rheology of starch-sugar-milk systems (funded by Jordan Univ. of Science & Technology).

- Rheological characterization of local sludge at different steps of treatment (funded by Jordan Univ. of Science & Technology).
- Separation of para-xylene from xylene solution using crystallization (funded by Jordan Univ. of Science & Technology).
- Waterproof Polymeric Heat Insulators Based on Local Fillers (funded by The Higher Council for Science and Technology / Jordan)
- Production of ferric chloride from scrap iron (funded by The Higher Council for Science and Technology / Jordan).
- Extending the shelf life of Urea-Formaldehyde resin using antioxidants (funded by Jordan Univ. of Science & Technology).
- Viscosity and density of Dead Sea salts (funded by The Abdul Hameed Shoman Foundation / Jordan).
- Effect of Dead Sea salts on the rheology and stability of Cosmetics (funded by Ammon Co. for Dead Sea Products and Jordan Univ. of Science & Technology).

Reviewing Activities for Scientific Journals

- Journal of Chemical Engineering of Japan
- Construction & Building Materials
- Powder Technology
- Applied Clay Science
- European Journal of Engineering Education
- Water Treatment and Desalination
- Food Biophysics
- J. of Engineering Science and Technology
- Emirates J. for Engineering Research
- Journal of Food Engineering (Elsevier Science Ltd., Holland)
- International Food Research (Elsevier Science Ltd., Holland)
- Journal of the Science of Food and Agriculture (Wiley-Science, USA)
- Journal of Food Science & Technology (Blackwell Publisher, UK)
- Mu'tah Lil-Buhuth wad-Dirasat (Mu'tah University, Jordan)
- Abhath Al-Yarmouk Journal – Science and Engineering Series (Yarmouk University, Jordan)

Research Visits

- Visiting Researcher at the Institute of Physical Chemistry, University of Kiel, Germany (September, 1 – 21, 2003).
- Visiting Researcher at the Department of Fluid Mechanics, University of Erlangen-Nürnberg, Erlangen, Germany (July 1, 2000 - August 31, 2000).
- Visiting Researcher at the Faculty of applied Physics, University of Twente, Enschede, Holland (June 15, 1997 - August 15, 1997).

Editorial Boards & Conferences Committees

- Editorial Board Member of “Rheology: Open Access”; <https://www.omicsonline.org/editorialboard-rheology-open-access.php>
- Editorial Board Member of “International Journal of Chemical Engineering and Application”; <http://www.ijcea.org/list-11-1.html>
- Member of the Technical Committee of The 6th International Conference on Chemical and Process Engineering (ICCPE 2017), May 25-27, 2017, Beijing, China; <http://www.iccpe.org/com.htm>
- Program Co-Chair for The 5th International Conference on Chemical and Process Engineering (ICCPE 2016), May 25-27, 2016, Jeju Island, Republic of Korea.

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- Member of the Scientific Committee of Asia-Pacific Conference on Chemical and Material Engineering (ACCME), November 14-15, 2015, Dubai, UAE.
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Honors & Awards

- Scholarship from German Academic Exchange Service (DAAD), Summer 2005.
 - Scholarship from German Research Foundation (DFG), Summer 2003.
 - Scholarship from German Academic Exchange Service (DAAD), Summer 2000.
 - Ph.D. Scholarship from German Academic Exchange Service (DAAD), 1992-1996.
 - B.Sc. Scholarship from Palestinian Fund for Higher Education in Kuwait, 1983-1988.
 - Receiving an Award of AED 20,000 from the Research Office (UAEU) in recognition of receiving a granted patent (December, 2016).
 - My Graduation Project students won the 1st prize for the best Poster Design and the 1st prize for the best project idea in the college graduation projects competition, December 2016.
 - Thank and Recognition from Umm Al Quwain municipality for my contribution in its Innovation Week activities, November 2016.
 - Thanks and Recognition from UAEU for my contribution to the success of “Marhaba Alssaa”; New Student Orientation Program, January 2010.
 - Thanks from UGRU Dean and the Student Development Coordinator (UAEU) for my contribution in the welcome students event, February 2008.
 - A year’s complimentary membership of the Society of Chemical Industry, London (2006 – 2007).
 - Thanks and Recognition from “AMMON FOR DEAD SEA SALTS & SOAP PRODUCTS” company for considering their industrial problems and interests in my students graduation projects and M.Sc. theses.
 - Thanks and Recognition for my research contribution in 40th Science Week, November 4 – 9, 2000, El- Lathqeh, Syria.
 - One of the top 10 productive researchers in Jordan for the period 1995 – 2005 based on a study published by COMSTECH (Organization of Islamic Conference).
 - Thanks and Recognition from Jordan Engineers Association for participation in organizing Jordan International Chemical Engineering Conferences III.
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TEACHING, MENTORING, AND ADVISING

Courses Taught

Undergraduate Courses

- Fluid Mechanics (taught for Chemical, Petroleum, Civil and Bio-systems Engineering students).
- Renewable Energy Sources
- Heat Transfer
- Chemical Engineering Fundamentals.
- Chemical Engineering Reactions.
- Fundamentals of Polymers.
- Water and Wastewater Treatment.
- Transport Phenomena in Biomedical Engineering
- Process Analysis and Computer Applications
- Plant Operations & Systems
- Process Instrumentations
- Instrumentation for Engineering Measurements
- Unit Operations (Momentum, Heat and Mass Transfer).
- Linear Algebra
- Fluid Mechanics Lab.
- Instrumentation Lab.
- Chemical Engineering Laboratory I & II.

Graduate Courses

- Transport Phenomena
- Advanced Fluid Flow
- Energy Resources
- Advanced Polymer Engineering

Supervised Graduation Projects

- Production of Biodegradable Polyester (Polylactic Acid, PLA)
 - Production of Lactic Acid from Renewable Resources.
 - Red Mud Neutralization & Storage Management
 - Alumina Production
 - Production of Phthalic anhydride
 - Production of Methanol from Natural Gas
 - Production of Sulfonic Acid Salts
 - Oxalic Acid Production
 - Urea Production
 - Vinyl Chloride Production
 - Styrene Monomer Production
 - Styrene Monomer Production via Oxidative Dehydrogenation of Ethylbenzene using Carbon Dioxide
 - Ethylene Oxide Production
 - Chlorine Production
 - Dead Sea Shampoo
 - Polyester-Bentonite Composite Materials
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Supervision of Master Thesis

- Waseem Yousef Hittini, “Waste-Based-Thermoplastic Composites Heat Insulators Development”, UAE University – UAE (Starting Fall 2016).
- Osama Abu-Alyoser Kamal, “Investigating green inhibitors for acidic corrosion of carbon steel”, UAE University – UAE (Starting Spring 2016).
- Muzamil Hassan, “Development of Polymeric Heat Insulators Based on Local Clay”, UAE University – UAE (2015).
- K. Takrouri, “Separation of para-xylene from xylene solution using crystallization”, Jordan Univ. of Science & Technology – Jordan (2004).
- A. Bsoul, “Effect of Dead Sea salts on the rheology and stability of body creams”, Jordan Univ. of Science & Technology – Jordan (2003).
- A. Abdelhai, “Extending the shelf life of Urea-Formaldehyde resin using antioxidants”, Jordan Univ. of Science & Technology – Jordan (2003).
- M. Al-Sameraiy, “Rheological characterization of local sludge at different steps of treatment”, Jordan Univ. of Science & Technology – Jordan (2003).
- A. Eassa, “Rheology of starch-sugar-milk systems”, Jordan Univ. of Science & Technology – Jordan (2002).
- Mona Batainah, “Characteristics of heat transfer from a helical coil to an agitated liquid”, The Univ. of Jordan – Jordan (2000).
- M. El-Khateeb, “Batch crystallization of KCl: Estimation of kinetic parameters”, Jordan Univ. of Science & Technology – Jordan (2000).

Advising Activities

- Academic Advisor for Chemical Engineering students (Class of 2011; 80 students).
- Academic Advisor for First Year Engineering Students, 2008-2010, UAEU.
- Academic Advisor for 2005-Class of Chemical Engineering Male Students, UAEU.
- Involved in the recruiting of new engineering students, UAEU.
- Supervised the industrial training for many Chemical Engineering students, UAEU.
- Acted as a coordinator for graduation projects in the college, where several seminars have been conducted, UAEU.
- Supporting several graduates with recommendation letters.

Extension and Outreach Activities

- Examiner for the graduation projects on department and college levels, UAEU.
- Member of the Exit Interview committee for Chemical Engineering Students, UAEU.
- Attending the “ABET Program Assessment workshop” held in Dubai, UAE (March 2, 2015)
- Attending “Training Skills Workshop” offered by Continuing Education Centers at UAEU (May 25 & June 1, 2008)
- Attending “Modern teaching and evaluation methods” workshops at JUST (September 6 – 10, 1997 and January 24 -26, 1998)
- Attending United Arab Emirates University Accreditation Workshop Presented by Jerry Yeargan and Mario Gonzalez (May 20-22, 2007)
- Attending “Educational Outcomes Assessment Workshop” at the UAEU (December 4, 2006)
- Attending the “Symposium on Engineering Education 2009”, Al-Ain, UAE (May 16-18, 2009).
- Attending a workshop on Laser Science and its Applied Technology organized by National Institute of Laser Enhanced Science (Egypt) and ICS-UNIDO (Italy), November 9 - 21, 1998, Cairo University, Egypt.

COMMUNITY & UNIVERSITY SERVICE

Consultancies

- Preparation of the applications for Initial CAA (COMMISSION FOR ACADEMIC ACCREDITATION , UAE) Accreditation of BSc programm in Petroleum Engineering and BSc program in Chemical Engineering at the American University of Ras Al Khaimah (AURAK), 2014. The CAA accreditation for both programs have been recived within a remarkable period of time, also CAA stated that AURAK application for these programs was so much distinguished and one of the best applications that CAA has ever received.
 - Evaluation of Opportunities for the Use of Seawater Naturalized Bauxite Residue in UAE Agriculture for MDC INDUSTRY HOLDING COMPANY LLC (MUBADALA) & DUBAI ALUMINIUM (DUBAL), August 2013 – September 2014.
 - Consultation (with other Faculty members) for Emirates Industrial Gas Co. ROC – Engineering, Dubai – UAE. Project: Management of Calcium Hydroxide Slurry: Phase I; Characterization and Environmental Assessment, 2007-2008.
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Conducted Short Courses

- Boilers, Steam Turbines & Steam System Operations, OMIFCO Training Center, Sur, Sultanate of Oman, August 31- Sep 2, 2016.
 - Boilers, Steam Turbines & Steam System Operations, OMIFCO Training Center, Sur, Sultanate of Oman, August 26-28, 2016.
 - Gas Processing & Conditioning, GASCO training Center, Abu-Dhabi, UAE, Sep 27- Oct 1, 2015.
 - Gas Processing & Conditioning, GASCO training Center, Abu-Dhabi, UAE, May 17-21, 2015.
 - Basic Corrosion, GASCO training Center, Abu-Dhabi, UAE, December 28-31, 2014.
 - Sulfur Recovery & Troubleshooting, GASCO training Center, Abu-Dhabi, UAE, November 16-20, 2014.
 - Gas Processing & Conditioning, GASCO training Center, Abu-Dhabi, UAE, February 16-20, 2014.
 - Boiler Operation and Water Treatment, GASCO training Center, Abu-Dhabi, UAE, December 22-26, 2013.
 - Maintenance Management for Oil and Gas Industry, Pacific Energex Innovation LLC, Istanbul, Turkey, September 23-27, 2013.
 - Basic Corrosion, GASCO training Center, Abu-Dhabi, UAE, April 14-18, 2013.
 - Introduction to Oil and Gas Operations, GASCO training Center, Abu-Dhabi, UAE, April 7-11, 2013.
 - Sulfur Recovery & Troubleshooting, GASCO training Center, Abu-Dhabi, UAE, March 25-29, 2012.
 - Chemical Handling Awareness, Public Course, Bahrain, November 8-12, 2009.
 - Hydraulics & Pneumatics, Nuqul Group, Amman, Jordan, August 16-18, 2009.
 - Distillation Design and Operation, GASCO training Center, Abu-Dhabi, UAE, June 22-26, 2009.
 - Natural Gas Processing, Public Course; Abu-Dhabi, UAE, March 22-26, 2009.
 - Natural Gas Processing, Public Course; Abu-Dhabi, UAE, November 2-6, 2008.
 - Safety for Oil Refinery Operators, TAKREER, UAE, July 6-9, 2008.
 - Pilot Plants and Scale Up Studies, Public Course; Dubai, UAE, June 21-26, 2008.
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- Distillation Design and Operation, GASCO training Center, Abu-Dhabi, UAE, April 27-May 1, 2008.
- Polymer Engineering and Technology, Public Course; Fairmont Hotel, Dubai, UAE, August 19-23, 2007.
- Chemical Handling Awareness, Emirates Steel Industries, Abu-Dhabi, UAE, August 12-14, 2007.
- Distillation Design and Operation, GASCO training Center, Abu-Dhabi, UAE, July 22-26, 2007.
- Boiler Operation and Maintenance, SABIC, Al Dhahran International Hotel, Al-Khobar, Saudi Arabia, July 14-18, 2007.
- Chemical Plants Troubleshooting, SABIC training center, Jubail, Saudi Arabia, March 3-7, 2007.
- Basic Instrumentation and Control. SABIC training center, Jubail, Saudi Arabia, August 26-30, 2006.
- Chemical Plants Troubleshooting, SABIC training center, Jubail, Saudi Arabia, August, 19-23, 2006.
- Chemical Plants Troubleshooting, SABIC training center, Jubail, Saudi Arabia, June 17-21, 2006.
- Basic Instrumentation and Control. SABIC training center, Jubail, Saudi Arabia, May 13-21, 2006.
- Polymer Engineering, SABIC training center, Jubail, Saudi Arabia, December 17-21, 2005.

Offices and Committee Memberships Held in Professional Organizations

- Program Co-Chair and member of the technical committee of The 2017 6th International Conference on Chemical and Process Engineering (ICCPE 2017), May 25-27, 2017, Beijing China.
- Editorial Board Member of International Journal of Chemical Engineering and Applications.
- Program Co-Chair and member of the technical committee of The 2016 5th International Conference on Chemical and Process Engineering (ICCPE 2016), May 23-25, 2016, Republic of Korea.
- Member of the scientific committee of the Asia-Pacific Conference on Chemical and Material Engineering (ACCME'15), 2015, Dubai, UAE.
- Member in Jordan Engineers Association.
- Member in the Society of Rheology.
- Member in organizing and scientific committees of Jordan International Chemical Engineering Conference III organized by Jordan Engineers Association, September 27 - 29, 1999, Amman, Jordan.
- Member in organizing committee of Jordan International Chemical Engineering Conference IV organized by Jordan Engineers Association, September 22 - 24, 2002, Amman, Jordan.

Reviewing Activities & Services for Agencies

- Evaluation of scientific work submitted to Rashed Iben Humid Prize, 2009, UAE.
- Evaluation of research proposals submitted to Sultan Qaboos University, 2010 and 2013, Oman.
- Evaluation of Promotion case for Nizwa University, Oman, 2013.
- Member in the permanent committee of polymer standards / Jordanian Institution for Standards and Metrology. 2002-2004.
- Member in the permanent committee of carpets standards / Jordanian Institution for Standards and Metrology. 2002-2004.

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- Referee for many applications of patents that submitted to the Ministry of Industry and Commerce in Jordan.
 - Member in the Technical Committee of the bid of TEL ERMAH Yoghurt Factory, 2004, Jordan.
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Campus Activities

- Preparation some parts of the Chemical Engineering Self Study Report for CAA Accreditation (November, 2016).
 - Act as the College of Engineering WASC Liaison Officer (CLO), 2014 - present
 - Member of the University Periodic Program Review Committee (UPPRC), UAEU, 2014-2015.
 - Member of the College of Engineering Promotion Committee, UAEU, 2014-present.
 - Chair of the College of Engineering Promotion Committee, UAEU, 2012-2014 (Five promotion cases for Professor Rank were handled).
 - Member of the College of Engineering Academic Ranking Committee, 2015-present.
 - Preparation of three Chapters in Chemical Engineering Self Study Report 2015 for ABET Accreditation: Program Educational Objectives, Student Outcomes & Continuous Improvement. ((*The program has received the ABET Accreditation on September. 2016*).
 - Preparation of the Chemical Engineering Self Study Report 2010 for ABET Accreditation (*The program has received the ABET Accreditation on September. 2010*).
 - Chair of the Department of Chemical and Petroleum Engineering Outcomes Assessment Committee, UAEU, 2007-2016.
 - Member of the Department of Chemical and Petroleum Engineering Outcomes Assessment Committee, UAEU, 2016-present.
 - Chair of the Department of Chemical and Petroleum Engineering Laboratory Committee, UAE, 2009 – present.
 - Chair of the Department of Chemical and Petroleum Engineering Computer & Internet Applications Committee, UAEU, 2007-2008.
 - Chair of the Department of Chemical and Petroleum Engineering Laptop Project & Course Innovations Committee, UAEU, 2007-2008.
 - Member of the following Department of Chemical and Petroleum Engineering committees: Research and Graduate Studies (Fall 2012 – present), Curriculum Committee (Fall 2012 – present) Computer & Internet Applications (Fall 2008-present), Laptop Project & Course Innovations (Fall 2008-present), Faculty Selection & Recruitment (2008-2010), and Industrial Training Supervisors (2007 – present).
 - Coordinator of the Inspection Committee for the Shared Labs in the new campus of UAEU, Feb. 2010.
 - Author of the Annual Outcomes Assessment Reports for Chemical Engineering Program (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014).
 - Member of the UAEU's College of Engineering Outcome Assessment Committee, 2007 – present.
 - Member of the UAEU's College of Engineering Laptop project & course innovations Committee, 2007 - 2008.
 - Member of the UAEU's College of Engineering Peer Evaluation of Teaching Committee, 2007- 2013.
 - CRU-students (General Engineering Students) academic advisor, UAEU, 2008-2010.
 - Participation in the UAEU's College of Engineering Graduation Projects Examination Committees.
 - Participation in the UAEU's College of Engineering Final Presentation of Industrial Training Committees.
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- Coordinator of the Exhibition Stand of Engineering College (UOB) at the 3rd Middle East Metrology Conference and Exhibition, May 29-31, 2006, Manama, Bahrain.
 - Proctoring member for final exams of General Education courses at UAEU.
 - Participation in “Marhaba Alssaa”; New Student Orientation Program, January 2010.
 - Carried out paper evaluation for the Awards of UAEU Research Conferences.
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Local & National Community

- Acted as a Vice-President of Parents and Teachers Council for Al Itihad National Private School, Al-Ain – UAE, 2010 – 2012.
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