

CURRICULUM VITAE



Name: Almahdi Atteya Alhwaige

Address : University of Tripoli, Tripoli, Libya
Mobiles: +218 (94) 5118178 ; +218 (91) 5118179
E-Mails: a.alhwaige@uot.edu.ly
aaalhwaige@elmergib.edu.ly
almahdi.alhwaige@gmail.com

Date of Birth June 05, 1975 – Zliten, Libya.
Marital Status Married, two sons and two daughters (3 are US citizen).

ACADEMIC QUALIFICATION

2015	M. Sc in Macromolecular Science and Engineering, Case Western Reserve University (CWRU), Cleveland, Ohio, USA
2014	PhD. in Chemical Engineering, Case Western Reserve University (CWRU), Cleveland, Ohio, US
2004	M. Eng. in Chemical Engineering (UKM) Bangi, Selangor, Malaysia.
1997	B. SC. in Chemical Engineering, University of Tripoli (Previously: Al-Fateh University), Tripoli, Libya.

OFFICIAL POSITIONS AND DEPARTMENTAL DUTIES

- Associate Professor at University of Tripoli (Previously: Al-Fateh University), Tripoli, Libya
- Associate Professor at Elmergib University, Alkhoms, Libya
- Coordinator of the Postgraduate Studies at Faculty of Engineering, Elmergib University, Alkhoms, Libya
- A member of the Postgraduate Studies committee, Elmergib University, Alkhoms, Libya
- Chairman of the Scientific Committee, Chemical and Petroleum Engineering Department, Faculty of Engineering, Elmergib University, Alkhoms, Libya

RESEARCH

- Synthesis and Characterizations of Novel Polymers and Nanocomposites
- Development and Characterizations of Porous Materials for Reaction and Separation Applications
- Carbon Dioxide Capture and Conversion
- Nanotechnology and Nanofluid
- Water Purification
 - Adsorption of dyes and heavy metal ions
 - Photocatalytic oxidation of organic pollutants in wastewater
 - Membrane separation processes for water desalination and

purification

- Thermodynamics
- Process design, modeling, and simulation
- Fluidization
- Particle technology

EXPERIENCE

Jul.1997–Jan. 2002	Chemical Engineer, teaching at High School.
Feb, 2002– Aug. 2004	Research towards M.Eng, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor, Malaysia.
Oct. 2004–May 2008	Assistant Lecturer at Chemical Engineering Department, Elmerghib University, Alkhoms, Libya.
Oct. 2004–May 2008	Part-time at Higher Professional Center for Qualifying Technical Instructors, Zliten, Libya.
Jun. 2008–Jul. 2009	ELS Language Centers, Cleveland, Ohio, USA.
Aug. 2009–May. 2014	Research towards PhD, Case Western Reserve University (CWRU); Cleveland, USA.
Jul. 2014–Jun. 2017	Lecturer at Chemical and Petroleum Engineering Department, Elmerghib University, Alkhoms, Libya.
Jul. 2017–Jun. 2021	Assistant Professor at Chemical and Petroleum Engineering Department, Elmerghib University, Alkhoms, Libya.
Jul. 2021–Mar. 2023	Associate Professor at Chemical and Petroleum Engineering Department, Elmerghib University, Alkhoms, Libya
Apr. 2023–tile now	Associate Professor at University of Tripoli (Previously: Al-Fateh University), Tripoli, Libya

TEACHING EXPERIENCE

Since April 2004 up to now taught the following courses at the Chemical Engineering Department, University of Tripoli, Tripoli, Libya.

- Chemical Engineering Thermodynamics I
- Fluid Mechanics
- Mass Transfer I
- Chemical Engineering Reaction I & II
- Polymer Science and Technology

Since March 2004 up to March 2023 taught the following courses at the Chemical and Petroleum Engineering Department, Elmerghib University, Alkhoms, Libya.

- Chemical Engineering Thermodynamics I & II
- Fluid Mechanics I & II
- Heat Transfer I
- Mass Transfer I
- Chemical Engineering Reaction I & II
- Biochemical Engineering
- Membrane Science and Technology
- Environmental Engineering
- Numerical Analysis and Applications
- Fluid Flow in Porous Media (for Petroleum Engineering students)
- Advanced Numerical Analysis and Applica. (for Postgraduate students)

- Environmental Pollution and Control (for Postgraduate students)
- Advanced Chemical Reaction Engineering (for Postgraduate students)
- Advanced Transport Phenomena (for Postgraduate students)

2010 - 2013, Teaching Assistant at the Chemical and Biomolecular Engineering Department, Case Western Reserve University, Cleveland, OH, USA.

- Thermodynamics of Chemical Systems
- Process Control
- Measurements Laboratory

Since 2014 up to March 2023, for part time, taught the following courses at the Chemical Engineering Department, Alasmarya Islamic University, Zliten, Libya.

- General Chemistry
- Organic Chemistry
- Mechanics II (Dynamics)
- Chemical Engineering Thermodynamics I & II
- Chemical Engineering Reaction I & II
- Mass Transfer I
- Transport Phenomena

Since 2004 up to 2015 for part time, taught the following courses at Higher Professional Center for Qualifying Technical Instructors, Zliten, Libya.

- General Chemistry
- Physical Chemistry
- Process control
- Introduction to Chemical Engineering
- Technical English

SUPERVISION OF B.SC STUDENTS

At Elmergib University

- Plant Design of Delayed Coking Unit. (B.Sc Project, 2004/2005)
- N-Octane Production Using Gas to Liquid "Fischer-Tropsch" Technology (B.Sc Project, Spring, 2005/2006)
- Plant Design of Vinyl Chloride Production. (B.Sc Project, 2006/2007)
- Plant Design of Toluene Production. (B.Sc Project, 2007/2008)
- Plant Design of Cyclohexane Production. (B.Sc Project, 2007/2008)
- Development of Novel Catalyst for Photocatalytic Oxidation of Methylene-Blue Dye in Wastewater. (B.Sc Project, 2016/2017)
- Experimental Investigation of Fluid flow Through Real Core Samples from A86 Oil Field, Libya. (B.Sc Project, 2017/2018)
- Synthesis and Characterization of Mixed Matrix Nanocomposite Membranes for Wastewater Treatment Applications. (B.Sc Project, 2018/2019)
- Investigation of Thermal Efficiency of Newly Developed Nanofluids from Diesel-Based Carbon Nanoparticles in flame reactor. (B.Sc Project, 2018/2019)
- Magnetic Carbon Particles-Derived from Biomass of Date-Syrup/Rust Nanocomposites and their Adsorption Performance of Methylene Blue

- Dye. (B.Sc Project, 2018/2019)
- Design and Evaluation of Continuous Flow Photocatalytic Reactor for Wastewater Treatment Applications (B.Sc Project, 2019/2020)
- Kinetics of Synthesis and Polymerization of Benzoxazine Monomer: Case Study (B.Sc Project, 2020/2021)
- Recycling of Waste Face Masks for Wastewater Treatment Applications (B.Sc Project, 2021/2022)
- Modeling for Optimization of Parameters for Biodiesel Production (B.Sc Project, 2021/2022)
- Synthesis of Biodiesel from Corn Oil and Methanol by Homogeneous Acid Catalyzed Transesterification (B.Sc Project, 2021/2022)
- Fixed Bed Adsorption Column Studies for Removal of Congo Red Dye using Sustainable Sorbents Derived from Plant Leaf Powder (B.Sc Project, 2022/2023)
- Design of Gas Mixture Sweetening Units: A Case Study of Waste Tires Pyrolysis Gas Mixture (B.Sc Project, 2022/2023)

At University of Tripoli

- Design and Evaluation of Continuous Flow Photocatalytic Reactor for Wastewater Treatment Applications (B.Sc Project, 2022/2024)
- Simulation and Analysis of Separation Process for Fuel Gases Production from Tires Pyrolysis (B.Sc Project, 2023/2024)
- Simulation and Analysis of Plant Design for Dimethyl Ether Production from Methanol Catalytic Dehydration (B.Sc Project, 2023-Under processing)
- Equilibrium and Kinetics of Methylene Blue Dye Removal from Aqueous Solution using Biomass-Derived Carbon Spheres (B.Sc Project, 2024-Under processing)
- Biomass-Derived Carbon Spheres for Methylene Blue Dye Removal from Aqueous Solution: Kinetics, Mass Transfer, and Isothermal Modeling

SUPERVISION OF POSTGRADUATE STUDENTS

M.Sc Students

- Main-advisor of M.Sc Thesis: **Ibrahim M. Al-Eseifir**, Nanofluids Derived from Hydrocarbon-based Carbon Nanomaterials: Preparation, Physical Properties, and Heat Transfer Analysis, Elmergib University, (2019, Final version)
- Co-advisor of M.Sc Thesis: **Ibrahem M. Alarbie**, Development of Date Syrup-based Sorbents for Wastewater Treatment Applications in Continuous Fixed Bed Column, The Libyan Academy of Graduate Studies, (2019, Under processing)
- Main-advisor of M.Sc Thesis: **Ibrahim M. Al Ferjany**, Modeling of Thermodynamics and Kinetic Analysis for Conversion of CO₂ to Diethyl Carbonate, The Libyan Academy of Graduate Studies, (2022, Under processing)
- Main-advisor of M.Sc Thesis: **Abdulbaset I. Isbeegah**, Batch Adsorption Study on the Removal of Dye Pollutants from Aqueous Solution using Sustainable Sorbents –Derived from Mesembryanthemum Crystallinum–

COMPUTER APPLICATION PACKAGES DEVELOPMENT

The following computer programs and packages have been established:

- Fortran Program for Gravitational Composition Gradients in Static Column of Hydrocarbon fluids
- Simulation of Diffusion and Kinetics of CO₂ Adsorption by Cylindrical Carbon Aerogels
- Matlab Program for Prediction of Thermodynamic Properties of Natural Gas Mixture Feedstock of Mellitah Gas Plant in Libya

COMPUTER SKILLS

- Microsoft: Word, Origin, Excel, Power point
- Language: FORTRAN
- Software: MATLAB and HYSIS

INSTRUMENTS USED

- Freeze-drying technique
- Fourier transform infrared spectrophotometer (FTIR)
- Proton nuclear magnetic resonance (¹H-NMR)
- Scanning Electron Microscopy (SEM)
- X-ray Diffraction (XRD)
- Differential scanning calorimetry (DSC)
- Thermogravimetric analysis (TGA)
- Dynamic mechanical analysis (DMA)
- N₂-adsorption-desorption measurements (Intelligent Gravimetric Analyzer (IGA))
- UV-visible spectroscopy

LANGUAGES

- Arabic (Native language)
- English

ORGANIZATION OF CONFERENCES AND WORKSHOPS

- December, 2016 The Chairman, the 1st International Conference on Chemical, Petroleum, and Gas Engineering (ICCPGE-2016), Elmergib University, Alkhoms, Libya
- December, 2021 The Chairman of the Scientific Committee, the 4th Conference on Engineering Science and Technology (CEST-2021), Alasmarya Islamic University, Zliten, Libya
- December, 2022 A member of the Scientific Committee, the Petroleum and Chemical Engineering Tracks, the 5th Conference on Engineering Science and Technology (CEST-2022),

Nalut University, Jado, Libya

- October, 2024 The Coordinator of the Scientific Committee, the Chemical and Oil Engineering Sector, the 6th Conference on Engineering Science and Technology (CEST-2024), The Higher Institute of Science and Technology, Tarhuna, Libya

AWARDS, PRIZES, AND HONORS

- 2021 A certificate from president of Alasmarya Islamic University for excellent organization of CEST-2021
- 2016 A certificate from president of Elmergib University for excellent organization of ICCPGE-2016
- 2015 Award for outgoing student in M. Sc. program in Macromolecular Science and Engineering at CWRU
- 2014 Award for outgoing student in PhD program in Chemical Engineering at CWRU
- 2008 Financial support in the form of a national scholarship for PhD. program in Chemical Engineering from the Ministry of Education of Libya

PROFESSIONAL MEMBERSHIP

- 2011 up to now American Chemical Society (ACS)
- 2012 up to now American Institute of Chemical Engineers (AIChE)
- 2014 up to now Fundamentals of Adsorption Society (IAS)

CONSULTATION AND COLLABORATIONS

- **University of Tripoli, Tripoli, Libya**
 - Co-advisor of M.Sc Thesis: Novel Chitosan/Polyester Crosslinked Spheres for Adsorption of Metal Ions (2016-2018)
 - Co-advisor of M.Sc Thesis: Development of ZnO-based Renewable Nanocomposites for Photocatalytic Oxidation of Methylene Blue Dye in Aqueous Solutions (2017-2019)
- **Libyan Academy for Postgraduate Studies, Tripoli, Libya**
 - Main-advisor of M.Sc Thesis: Novel Biomass-Based Porous Carbon Spheres as Low Cost Effective Materials for Adsorption of Methylene Blue Dye (Under processing)
 - Main-advisor of M.Sc Thesis: Modeling of Thermodynamics and Kinetic Analysis for Conversion of CO₂ to Diethyl Carbonate (2022 Under processing)
- **Elmergib University, Alkhoms, Libya**
 - Main-advisor of M.Sc Thesis: Nanofluids Derived from Waste Hydrocarbon-based Carbon Nanomaterials: Preparation, Physical Properties, and Heat Transfer Analysis (Under processing)
 - Co-advisor of M.Sc Thesis: Development of Date Syrup-based

Sorbents for Wastewater Treatment Applications in Fixed Bed Adsorption Column (Under processing)

- **Alasmarya Islamic University, Zliten, Libya**
 - A member of the scientific committee: Construction the educational program and organization the syllabus for the Chemical Engineering Department.
- **Misurata University, Misrata, Libya**
 - A member of a committee for organization the syllabus for construction of Chemical Engineering Department.
- **Reviewer of International Scientific Journals**
 - Chemical Engineering Journal
 - Journal of Environmental Chemical Engineering
 - Carbohydrate Polymers
 - Applied Clay Science
 - ACS Sustainable Chemistry and Engineering
 - ACS Applied Materials & Interfaces
 - ACS Applied Polymer Materials
 - Langmuir
 - Journal of Polymers and the Environment
 - Carbon
 - RSC Advances
 - Polymer
 - High Performance Polymers
 - Gels (MDPI)
 - Materials (MDPI)
 - Nanomaterials (MDPI)

PUBLICATIONS

I. Publications in Journals & Book Chapters

1. **Almahdi A. Alhwaige**, Ali F. Almabsot, Abdu Alsalam S. Alfrjany, Mujeeb Alrahman F. Dehoum, Wael Elhrarid, Anwar Ashibani, *Porous Film-Derived from Face Mask Coated with Chitosan/Maleic Anhydride Crosslinked Polymer for Removal of Methylene Blue Dye*, (Status: In preparation).
2. Omar El-Twerg, **Almahdi A. Alhwaige**, Wael Elhrari, Mohamed Amer; *Development of ZnO-based Renewable Nanocomposites for Photocatalytic Oxidation of Methylene Blue Dye in Aqueous Solutions*, (Status: In preparation).
3. Mohamed A Aburawi, **Almahdi A. Alhwaige**, Raja Ben Amer; *Preparation and Properties of Libyan Clay-Derived Ceramic Membrane*, Ceramic International, **2024** (Status: In preparation).
Almahdi A. Alhwaige, Hatsuo Ishida, and Syed Qutubuddin; *Nitrogen-Enriched Carbon Aerogels Derived from Polybenzoxazine Cross-Linked*

- Graphene Oxide-Chitosan Hybrid Matrix with Superior CO₂ Capture Performance*, ACS Applied Engineering Materials, **2024**, 2(6) 1672-1686.
4. Noeaddin A. Kriym, **Almahdi A. Alhwaige**, Wael Elhrari, Mohamed Amer; *Lead ions adsorption onto glycerol as renewable resource-based polyester/chitosan crosslinked spheres*, Journal of Environmental Chemical Engineering, **2021**, 9(6), 106628.
 5. **Almahdi A. Alhwaige**, Hatsuo Ishida, and Syed Qutubuddin; *Chitosan/polybenzoxazine/clay mixed matrix composite aerogels: preparation, physical properties, and water absorbency*, Applied Clay Science, **2020**, 184, 105403.
 6. **Almahdi A. Alhwaige**, Hatsuo Ishida, and Syed Qutubuddin; *Poly(benzoxazine-f-chitosan) films: The role of aldehyde neighboring groups on chemical interaction of benzoxazine precursors with chitosan*, Carbohydrate Polymers, **2019**, 209, 122 - 129.
 7. **Almahdi A. Alhwaige**, Matthew M. Herbert, Saeed M. Alhassan, Hatsuo Ishida, Syed Qutubuddin, and David A. Schiraldi; *Laponite/multigraphene hybrid-reinforced poly(vinyl alcohol) aerogels*, Polymer, **2016**, 91, 180 - 186.
 8. **Almahdi A. Alhwaige**, Hatsuo Ishida, and Syed Qutubuddin; *Carbon Aerogels with Excellent CO₂ Adsorption Capacity Synthesized from Clay-Reinforced Biobased Chitosan-Polybenzoxazine Nanocomposites*, ACS Sustainable Chem. Eng., **2016**, 4(3), 1286 - 1295.
 9. **Almahdi A. Alhwaige**, Saeed M. Alhassan, Marios S. Katsiotis, Hatsuo Ishida, and Syed Qutubuddin; *Interactions, morphology and thermal stability of graphene-oxide reinforced polymer aerogels derived from star-like telechelic aldehyde-terminal benzoxazine resin*, RSC Advances, **2015**, 3, 92719 - 92731.
 10. **Almahdi A. Alhwaige**, Tarek Agag, Hatsuo Ishida, and Syed Qutubuddin; *Bio-Based Chitosan Hybrid Aerogels with Superior Adsorption: Role of Graphene Oxide on CO₂ Capture*, RSC Advances, **2013**, 3, 16011-16020.
 11. **Almahdi A. Alhwaige**, Tarek Agag, Hatsuo Ishida, and Syed Qutubuddin; *Bio-based Chitosan/Polybenzoxazine Crosslinked Films: Preparation in Aqueous Media and Synergistic Improvements in Thermal and Mechanical Properties*, Biomacromolecules, **2013**, 14, 1806-18017.
 12. S. Tasirin; Siti K. Kamarudin; **A.-M. Alhwaige**, *Mixing Process of Binary Polymeric Particles in Different Type of Mixers*, Modern Applied Science, **2009**, 3(6): 88-95.
 13. S. Tasirin; Siti K. Kamarudin; **A. -M. Alhwaige**, *Mixing Behavior of Binary Polymer Particles in Bubbling Fluidized Bed*, Journal of Physical Science, **2008**, 19(1): 13-29.
 14. **Almahdi Atteya Alhwaige**; Siti Masrinda Tasirin ; Wan Ramli Wan Daud, *Experimental Study on The Mixing of a Binary Polymer Particles in Different Types of Mixer*, International Conference, Journal Applied Science 7 (15): 2200-2205, **2007**.

II. Presentations at Conferences

- 1. Almahdi A. Alhwaige**, Serag I. Alsharif , Abdalrzag E. Alazgal, Yussef A. Assilini, Esra A. Balhaj Soud Saad Awitil. *Kinetic Modeling of Main-Chain Benzoxazine Polymer Synthesis Studied using Polymath: Case Study*. Forth Conference for Engineering Sciences and Technology (CEST-2021), 14-16 October **2021**, Zliten, Libya.
- Mohammed A. El-Ghweil, **Almahdi A. Alhwaige**, Wael Elhrari. *Novel Green Photocatalysts Derived from Date Syrup-based biomass/TiO₂ for Photocatalytic Oxidation of Methylene Blue Dye in Aqueous Solutions*, First Conference for Engineering Sciences and Technology (CEST-2018), 25-27 September **2018**, Algarabulli, Libya.
- Almaki Abushaina, Abdelrahman Sultan, Wael Elhrari, **Almahdi A. Alhwaige**, *Novel Green Sorbents Derived from Mesembryanthemum-Based Biomass for Wastewater Treatment Applications*, First Conference for Engineering Sciences and Technology (CEST-2018), 25-27 September **2018**, Algarabulli, Libya.
- Almadi A. Alhwaige**, Ali S. Bshish, Salem M. Abdusalam, Ahmed M. Ebshish, *Modeling the Effect of CO₂ on Thermodynamic Behavior of CO₂/Libyan Natural Gas Mixture*, First Conference for Engineering Sciences and Technology (CEST-2018), 25-27 September **2018**, Algarabulli, Libya.
- Mohamed Baqar, Riyadh Mahfud, **Almahdi Alhwaige**; *Recent Advances of Benzoxazine Precursors for Multidisciplinary applications in Petroleum and Chemical Engineering*, 1st International Conference on Chemical, Petroleum, and Gas Engineering, December 20-22, **2016**; Alkhoms, Libya.
- Nooraddein A. krayem, **Almahdi A. Alhwaige**, Wael Elhrari, Mohamed Amer; *Biobased Chitosan/polyester Crosslinked Polymer: Preparation and Characterization of Novel Polymeric Spheres*, 1st International Conference on Chemical, Petroleum, and Gas Engineering, December 20-22, **2016**; Alkhoms, Libya.
- Salem M. Abdusalam , Ahmed M. Bshish, Ali S. Ebshish, **Almahdi A. Alhwaige**; *Simulation of Thermodynamic Properties of Natural Gas Mixture Feedstock of Mellitah Gas Plant*, 1st International Conference on Chemical, Petroleum, and Gas Engineering, December 20-22, **2016**; Alkhoms, Libya.
- Almahdi A Alhwaige**, Amer Al-Shareef, Ahmed M. Sowedan, Ali S. Ebshish, Ahmed M. Bshish and Saad M. Ghareba; *Batch Adsorption of Heavy Metal Ions Using Biomass-Based Activated Carbon Sorbents*, 2015 AIChE Annual Meeting, Division: Separation, 8-13 November, **2015**; Salt Lake City, UT, USA.
- Almahdi A. Alhwaige**; *Graphene Oxide-Reinforced Tetraethylenepentamine-Functionalized Polybenzoxazine Aerogels for CO₂ Adsorption*, TechConnect World 2015, June 14-16, **2015**.
- Almahdi A. Alhwaige**, Hatsuo Ishida, and Syed Qutubuddin; *High Selectivity of Advanced Nitrogen-Rich Carbon Aerogels Derived from Graphene Oxide-Reinforced Biobased Chitosan-Polybenzoxazine*

Nanocomposite Aerogels for CO₂/N₂ Separation, The conference on carbon capture, utilization & storage (Annual CCS 2015), April 28-May 1, **2015**; Pittsburgh, PA, USA.

- 11. Almahdi A. Alhwaige**, Hatsuo Ishida, and Syed Qutubuddin; Tetraethylenepentamine-Functionalized Polybenzoxazine Aerogel for CO₂ Adsorption; 249th ACS Spring National Meeting & Exposition, March 22-26, **2015** in Denver, Colorado, USA.
- 12. Ali Ebshish, Ahmed Sowedan, Almahdi A. Alhwaige**, Ahmed Bshish, Mohamed Amer; *Hydrogen Production by Catalytic Steam Reforming of Glycerol over Sol Gel Ni/Al₂O₃ Based Catalyst*, Energy Technologies Conference (ENTECH'14), December 22-14, **2014**; Istanbul, Turkey.
- 13. Almahdi A. Alhwaige**, Ali Ebshish, Ahmed Sowedan, Ahmed Bshish, Mohamed Amer; *Chitosan-Based Porous Carbon Materials with Superior Performance for CO₂ Adsorption*, Energy Technologies Conference (ENTECH'14), December 22-14, **2014**; Istanbul, Turkey.
- 14. Ahmed Sowedan, P. R. Williams, Almahdi A. Alhwaige**, Ali Ebshish; *New Approach for Haemocompatibility Measure of Biomedical Membranes*, Bioengineering Conference (BIOENG'14), November 27-29, **2014**; Istanbul, Turkey.
- 15. Almahdi A. Alhwaige**, Hatsuo Ishida, Syed Qutubuddin; *Facile Biobased Chitosan/Polybenzoxazine/Clay Carbon Aerogels with Superior CO₂ Adsorption Capacity*, 30th International Conference of the Polymer Processing Society (PPS-30), June 8-12, **2014**; Cleveland, OH, USA.
- 16. Almahdi A. Alhwaige**, Matthew Herbert, Seed Alhassan, Hatsuo Ishida, Syed Qutubuddin, David Schiraldi; Laponite/multigraphene poly(vinyl alcohol) aerogel, 30th International Conference of the Polymer Processing Society (PPS-30), June 8-12, **2014**; Cleveland, OH, USA.
- 17. Almahdi A. Alhwaige**, Hatsuo Ishida, and Syed Qutubuddin; *Poly(Benzoxazine-g-Chitosan): A New Approach for Polybenzoxazine/Biopolymer Thermosetting Resins via Imine-linkage Formation*; 246th ACS Spring National Meeting & Exposition, September 08-12, **2013** in Indianapolis, IN, USA.
- 18. Almahdi A. Alhwaige**, Tarek Agag, Hatsuo Ishida, and Syed Qutubuddin; *Clay reinforced Chitosan/Benzoxazine Aerogels as Novel Composite Hydrogels*; 246th ACS Spring National Meeting & Exposition, September 08-12, **2013** in Indianapolis, IN, USA.
- 19. Almahdi A. Alhwaige**, Hatsuo Ishida, and Syed Qutubuddin; *Chitosan/Polybenzoxazine/Montmorillonite Carbon Aerogels for CO₂ Capture*; Research ShowCASE 2013, April 12, **2013**, Cleveland, OH, USA.
- 20. Almahdi A. Alhwaige**, Seed Alhassan, Tarek Agag, Hatsuo Ishida, Syed Qutubuddin; *Effect of Graphene Oxide On Thermal and Morphological Behavior of Polybenzoxazine Aerogels*, 2012 AIChE Annual Meeting, Division: Nanoscale Science and Engineering Forum, 28 October – 02 November, **2012**; Pittsburgh, PA, USA.

21. **Almahdi A. Alhwaige**, Tarek Agag, Hatsuo Ishida, and Syed Qutubuddin; *Clay-Reinforced Chitosan/Polybenzoxazine Aerogels*; 244rd ACS Fall National Meeting & Exposition, August 25-29, **2012**; Philadelphia, Pennsylvania, USA. Division: PMSE
22. **Almahdi A. Alhwaige**, Tarek Agag, Hatsuo Ishida, and Syed Qutubuddin; *Aldehyde Functional Star-Like Benzoxazine Monomer and Its Copolymerization with Various Amines*; 244rd ACS Fall National Meeting & Exposition, August 25-29, **2012**; Philadelphia, PA, USA. Division: PMSE, Vol. 107, 302-303.
23. **Almahdi A. Alhwaige**, Tarek Agag, Hatsuo Ishida, Syed Qutubuddin; *Graphite oxide/chitosan aerogels as sorbents for CO₂ capture*, 243rd American Chemical Society Natural Meeting & Exposition, 25-29 March **2012**, San Diego, California, USA, Division: CLA.
24. **Almahdi A. Alhwaige**, Tarek Agag, Hatsuo Ishida, Syed Qutubuddin; *Preparation and properties of polybenzoxazine/chitosan polymer blends in aqueous media*, 243rd American Chemical Society Natural Meeting & Exposition, 25-29 March **2012**, San Diego, California, USA, Division: PMSE, Vol. 106, 356-357.
25. **Almahdi Atteya Alhwaige**, Siti Masrinda Tasirin, Ahmad Mokhtar Sowedan, Wan Ramli Wan Daud, *Study the Homogeneity of Mixing of Polyethylene Granular Material in Bubbling Fluidised Bed Mixer*, Works Cogerss on Engineering and Computer Science 2007, October 24-26, **2007**, San Francisco, USA.
26. **Almahdi Atteya Alhwaige**; Siti Masrinda Tasirin ; Wan Ramli Wan Daud, *Experimental Study on The Mixing of a Binary Polymer Particles in Different Types of Mixer*, International Conference, 20 Symposium of Malaysian Chemical Engineers **2006** (SOMChE 2006), 19 – 21 December 2006, Shah Alam, Selangor, Malaysia.
27. Ahmad Mokhtar Sowedan, **Almahdi Atteya Alhwaige** Optimise Sulfer Recovery Unit in Natural Gas Industry, International Conference on Environment 2006, Malaysia (ICENV2006), December **2006**, Benange, Malaysia.
28. Kamarudin, S. K., Tasirin, S. M., Wan Daud, W. R., **A. -M. Alhwaige**, *Local Behavior of Solid Mixing in Bubbling Fluidised bed*, AIChE, 2006 Spring National Meeting: Fifth World Congress on Particle Technology, 25 April **2006**, Orlando, FL, USA.

REFERENCES

1. Professor Syed Qutubuddin, Department of Chemical and Biomolecular Engineering, Case Western Reserve University, Cleveland, OH, USA. (Thesis Advisor: PhD. in Chemical Engineering). E-mail adress: sxq@case.edu
2. Professor Hatsu Ishida, Department of Macromolecular Engineering, Case

Western Reserve University, Cleveland, OH, USA. (Thesis Co-Advisor: PhD. in Chemical Engineering). E-mail address: hxi3@case.edu

- 3.** Professor David Schraldi, Department of Macromolecular Engineering, Case Western Reserve University, Cleveland, OH, USA. (Research Advisor: M. Sc in Macromolecular Science and Engineering). E-mail address: das44@case.edu
- 4.** Professor Daniel Lacks, Department of Chemical and Biomolecular Engineering, Case Western Reserve University, Cleveland, OH, USA. (Chairman: Chemical and Biomolecular Engineering). E-mail address: daniel.lacks@case.edu
- 5.** Professor Siti Masrinda, Department of Chemical and Process Engineering, University Kebangsaan Malaysia, Bangi, Malasia (Thesis Advisor: M.Eng. in Chemical Engineering). E-mail address: masrinda@eng.ukm.my
- 6.** Professor Mohamed Amer, Department of Chemical Engineering, Univrsity of Tripoli. (Project Advisor: B. Sc. in Chemical Engineering). E-mail: thah1990@gmail.com
- 7.** Associate Professor Saad M. Ghareba, Department of Chemical and Petroleum Engineering, Elmergib University, Alkhoms, Libya (Head of the department). E-mail: saadgareba@yahoo.com
- 8.** Associate Professor Muataz Ali Atieh, College of Science and Engineering, Hamad Bin Khalifa Univrsity, Education City, Doha, Qatar. E-mail: mhussien@qf.org.qa
- 9.** Associate Professor Saeed M. Alhassan, Department of Chemical Engineering, the Petroleum Institute, Abu Dhabi, United Arab Emirates. E-mail: salhassan@pi.ac.ae
- 10.** Associate Professor Mohamed A. Alnakoua, OJT Instructor (Process) Adnoc Offshore, Abu Dhabi, UAE (Collegue at Elmergib University). Emails: (1). malnakoua@adnoc.ae (2). manakoua@yahoo.co.uk