



- Sept 14- July 15 Visiting Academic, School of Chemical Engineering, Faculty of Engineering, Architecture and Information Technology, University of Queensland, Australia
- May 15– Sep 17 Assistant Chair in Nanotechnology for Desalination, Water Research Center, Sultan Qaboos University, Sultanate of Oman,
- Sept 08 – Present Assistant Professor, Petroleum and Chemical Engineering Department, Sultan Qaboos University, Sultanate of Oman
- Aug 17 – Present Director, Nanotechnology Research Center, Sultan Qaboos University, Sultanate of Oman

a) Active participation in University teaching and learning

• **Course Instruction**

Course Code	Course Title
CHPE 4302	Desalination
CHPE 4812	Waste Water Treatment
CHPE 4612	Unit Operations II
CHPE 3302	Fluid Flow
CHPE 4312	Chemical Engineering Lab I
PNGE 5102	Health, Safety & Environment
CHEM 4473	Applied Physical Chemistry
CHPE 4712	Chemical Engineering Lab II

• **Industrial Training Supervision**

- ENGR 3006 Industrial Training I

b) Student/ trainee advising and supervision

• **Students Projects Supervision**

- Project Title: 'Production of Urea'
Main Supervisor: **Mohammed Al-Abri**
Student Names: Kifah Al-Busaidi, Haseena Awladthan, Nouf Al-Badi, Entham Al-Abri
Status: Ongoing (2018-2019)
- Project Title: 'Production of Ammonia'
Main Supervisor: **Mohammed Al-Abri**



Student Names: Mahmoud Al-Mughairi, Nawaf Al-Badi, Said Al-Fahdi,
Mahmoud Al-Mahrouqi
Status: Completed (2018)

- Project Title: 'Design of Produced Water Treatment Plant'
Main Supervisor: **Mohammed Al-Abri**
Student Names: Zahra Al-Abri, Najiya Al-Omairi, Al safaa Al-Ghafri, Hajer Al-Sayadi
Status: Completed (2017)
- Project Title: 'Desalination'
Main Supervisor: **Mohammed Al-Abri**
Student Names: Hoor Al-Busaidi, Amna Al-Oufi, Noor Al Hamimi, Maryam Al Ouraimi
Status: Completed (2016)
- Project Title: 'Acetone production plant design'
Main Supervisor: **Mohammed Al-Abri**
Student Names: Azza Al-Riyami, Rahma Al-Sawwafi, Suad Al-Zakwani
Status: Completed (2014)
- Project Title: 'Production of Biodiesel from cooking oil wastes'
Main Supervisor: **Mohammed Al-Abri**
Student Names: Hassan Al-Lawati, Ali AL-Naamani, Murshid Al-Yarubi, Ahmed Al-Hinai
Status: Completed (2013)
- Project Title: 'Production of methanol from Municipal wastes'
Main Supervisor: **Mohammed Al-Abri**
Student Names: Marwa Al-Saifi, Tahani Al-Aufi, Aljalila Al-Siyabi, Alghaliah Al-Shabibi
Status: Completed (2013)
- Project Title: 'Design of a chemical plant to produce electricity and synthetic fuel from coal'
Main Supervisor: **Mohammed Al-Abri**
Student Names: Arwa Al Wahaibi, Sausan Al Khaziri, Rana Al-Maktoumi, Asiya Al-Mukhaini
Status: Completed (2012)
- Project Title: 'Production of Acrylic Acid'
Main Supervisor: **Mohammed Al-Abri**



Student Names: Ibrahim Al-Ajmi, Saud Al-Rawahi, Mohammed Al-Shabibi
Status: Completed (2011)

- Project Title: 'Production of Cyclohexane using Hydrogenation of Benzene'
Main Supervisor: **Mohammed Al-Abri**
Students Names: Nada Al-Sideiri, Wafa Al-Rahbi, Karima Al-Naqbi, Balqees Al-Amri, Zamzam Al-Subhi
Status: Completed (2008)

- Project Title: 'Production of Cyclohexane using Hydrogenation of Benzene' Main Supervisor: **Mohammed Al-Abri**
Students Names: Saaed Al-Shehhi, Seif Al-Shabibi, Salem Al-Salti, Sultan Al-Jahafi, Mohammed Al-Ma'mari
Status: Completed (2008)

- *Served as an External Examiner in MSc Examination Committee*

- Thesis Title: 'Force Reconstruction in Amplitude Atomic Force Microscopy'
Student Name: Yusra Yaqoob Al-Habsi
Exam Date: 27th August 2017

- Thesis Title: 'Synthesis and Characterization of Sol-gel Dip-coated Al-doped ZnO Thin Films''
Student Name: Basim Abdullah Al-Farsi
Exam Date: 11th May 2017

- Thesis Title: 'Magnetic Nanoparticles as Draw Solute in Forward Osmosis''
Student Name: Asmaa Sulaiman Al-Yahyai
Exam Date: 2nd September 2015

- Thesis Title: 'Investigation of heat transfer efficiency using Zinc Oxide (ZnO) and Aluminium Oxide (Al₂O₃) nanoparticles based fluid'
Student Name: Nasser Khalifa Al-Kindi
Exam Date: 30th September 2013

- Thesis Title: 'Supported ZnO nanostructures: Synthesis, kinetics and applications'
Student Name: Tharaya Said Al-Harthy
Exam Date: 10th August 2013

- Thesis Title: 'Design, simulation construction and testing of solar dish and two axes tracking system with economic considerations''



Student Name: Saif Khalfan Al-Jahwari

Exam Date: 11th December 2011

c) Participation in curriculum Development/ review and teaching management

- Extensive participation in curriculum development of the Chemical and Process Engineering program at SQU
- Actively contributed to the curriculum development of master's program in Chemical and Process Engineering at SQU
- Contributed to the development of Nanotechnology Undergraduate and Postgraduate Programs in Sultan Qaboos University under the directive of Vice-Chancellor, SQU
- Active participation in the preparation of the ABET accreditation program during the last two and current cycles (3 in total).
- Developed integrated curricula for the Chemical and Process Engineering BEng Degree
- Prepared audit reports for the courses listed below and were vetted by the coordinator of ABET Committee in 2010 and 2014. Another audit report for subsequent ABET review is in progress
 - CHPE 4612 Unit Operations II
 - CHPE 4312 Chemical Engineering Lab I
 - PNGE 5102 Health, Safety & Environment
 - CHPE 4712 Chemical Engineering Lab II
- Selection committee member of the textbook committee where I assisted in the development of regulations for the committee and developed scheme for textbook selection and addition.

d) Personal professional development in university teaching and learning

- Course on Fundamental of Technology Transfer organized by Center for Staff Development, SQU, Muscat, Oman: 25-26 November 2018
- Course on Senior leadership in academic institutions organized by Center for Staff Development, SQU, Muscat, Oman: 16 November 2017
- Course on Dealing with Media in Academic Institutes organized by Center for Staff Development, SQU, Muscat, Oman: 30 September 2017
- Workshop on Intellectual Property Rights and Patent Search... An Inseparable Tool to Foster Research and Innovation Outcomes organized by Academic Innovation Assistance Program, SQU, Muscat, Oman: 29-30 November 2015
- Workshop on Sustainable Program Assessment organized by Accreditation Board for Engineering and Technology (ABET), Foundation Inc., Muscat, Oman: 3-4 April, 2010



- Workshop on Becoming an effective supervisor co-organized by Sultan Qaboos University and Accreditation Board for Engineering and Technology (ABET), Foundation Inc., Oman (2009)

e) **Scholarship in university teaching and learning**

- Prepared/edited/updated course descriptions, materials and notes of the following courses:
 - CHPE 4612 Unit Operations II
 - CHPE 4312 Chemical Engineering Lab I
 - CHPE 4812 Waste Water Treatment
 - CHPE 4302 Desalination
 - PNGE 5102 Health, Safety & Environment
 - CHEM 4473 Applied Physical Chemistry
 - CHPE 4712 Chemical Engineering Lab II
- Participated in developing and designing experiments for
 - CHPE 4312 Chemical Engineering Lab I
 - CHPE 4712 Chemical Engineering Lab II
- Prepared Lab Manual for Chemical Engineering Lab I
- Prepared Lab Manual for Chemical Engineering Lab II
- Participate in the modification of the in-house training lab manual
- Developed rubrics as an assessment tool for Chemical Lab I and Chemical Lab II
- Participated in developing rubrics as assessment tools for Project I and II.
- **Students Advising and Mentoring at SQU**
 - Student advisor for cohorts 2008 (58 students) and 2015 (53 students)
 - Active interaction with Petroleum and chemical engineering industrial training students when serving as a training supervisor (2009-2010, 2012-2014).
 - Mentoring of following students as part of training from Higher College of Technology, Muscat
 1. Aziza Saeed Sulaiman Al-Naabi (2014)
 2. Ebtihal Juma Khamis Al-Wahibi (2014)
 3. Nusaiba Mohammed Nasser Al-Dahmani (2014)
 4. Rehab Khamis Salman Al-Faliti (2014)
 5. Zainab Ahmed Khalifa Al-Ansari (2014)
 6. Amani Al-Bakri (2015)
 7. Sumaya Al-Shaqsi (2015)
 8. Thurayaa Al- Akhzami (2016)



- Mentoring of following students as part of IASTE training program (since 2015)
 1. Wafa Al-Saidi, Oman (2015)
 2. Frauke Kügler, Germany (2015)
 3. Cornelia Beate Ruth Hermes, Germany (2015)
 4. David Zoepfl, Austria (2015)
 5. Kristian Pastor (2016)
 6. Patrycja Golec, Poland (2016)
 7. Danilo Jose Novais, Brazil (2016)
 8. Rossukhon Yaemklay, Thailand (2017)
 9. Alireza Tavana, Iran (2017)
 10. Stanislau Sendzetski, Belorussia (2017)
 11. Chanavee Limsuwan, Thailand (2018)
 12. Salma Trojette (2018)
 13. Viktor Milic, Serbia (2018)
 14. Yuki Harada, Japan (2018)
- Coordinating and conducting student visits to industries as part of engineering teaching program

f) Recognition in university teaching and learning

- External Reviewer of Oman Academic Accreditation Authority (OAAA), Oman (2014 – present)
- Letter of Appreciation from Royal Air Force of Oman, Cultural Committee for conducting a Seminar on ‘Nanotechnology and The Fourth Industrial Revolution’, Seen Airbase, Muscat, Oman (13 November 2018)
- Lead a review process for an academic program for licensing a program named “Bachelor of Engineering (Chemical Engineering), Ministry of Higher Education (2015)
- Member of Energy, Resources and Sustainability Task Force of the Academic Committee of University of Oman, Ministry of Higher Education (2014 – 2015)
- Letter of Appreciation from Oman National Commission for Education, Culture and Science for the organization and participation in Second Gulf Forum on Nanotechnology Awareness, Muscat, Oman (December 2015)
- Letter of Appreciation from The International Movement for Leisure Activities in Science and Technology (MILSET), Regional Office For Asia for the participation in Second Gulf Forum on Nanotechnology Awareness, Muscat, Oman (December 2015)
- Letter of Appreciation from the Vice Chancellor of Sultan Qaboos University for the efforts and contributions extended toward ABET Accreditation of Engineering Programs (May 2014)



- Letter of Appreciation from the Vice Chancellor of Sultan Qaboos University for the efforts and contributions extended toward ABET Accreditation of Engineering Programs, March 2010.

g) Leadership in university teaching and learning

- Introduced “Desalination” and “Waste Water Treatment” courses in Chemical and Process Engineering Program
- Developed “Applied Physical Chemistry” course in Applied Chemistry Program, College of Science
- Spear headed the interactive learning of students through research and experimental design
- Extensively contributed in the preparation of guidelines for the operation of several equipment used by undergraduate and postgraduate students. The major equipment include XRD, FTIR, particle sizing, photo-correlation spectroscopy, fluorescence spectroscopy, UV-Vis spectroscopy, surface area measurements, ICP-OES and GC-MS.
- Organized conferences, seminars, and workshops in the field of science and engineering for undergraduate and postgraduate students
 - Organization of “Introduction to Universiti Teknologi Malaysia (UTM) & Advanced Membrane Technology Research Centre (AMTEC)” Seminar presented by Dr Lau Woei Jye, Senior Lecturer, Faculty of Chemical and Energy Engineering, Universiti Teknologi Malaysia (UTM), Malaysia, 06 March 2017
 - Organization of “Atom-Like” Defects in Wide-Bandgap Semiconductors for Sensing and Imaging at the Nanoscale Seminar presented by Dr. Stefania Castelletto, Associate Professor, Royal Melbourne Institute of Technology University (RMIT), Melbourne, Australia, 22 February 2017
 - Organization of “The Nanomaterial-based Approach to Create New Methods to Address solving Big Challenges in 21th Century” presented by Dr. Reza Shidpour, Assistant Professor, Department of Advanced Technologies, Shahid Beheshti University, Tehran, Iran, 02 February 2017
 - Main organizer of “Nanotechnology for Water Treatment and Solar Energy Applications”, Muscat, Oman, 15-16 December 2015
 - Organization of “Nanotechnology in Water treatment” Workshop presented by Prof. Leslie Petrik, Department of Chemistry, University of the Western Cape, South Africa, 14 September 2015
 - Organization of “Advanced Sensor Technologies for Intelligent Fields” Seminar presented by Dr. Aydin Babakhani, Electrical and



Computer Engineering Department at Rice University, 17 November 2015

- Organization of “Printed electronics: the confluence of printing and semiconductors” Seminar presented by Prof. Vivek Subramanian, Department of Electrical Engineering and Computer Sciences, University of California, Berkeley, 13 September 2015
- Organization of “Nanotechnology workshop” presented by Prof. Heinrich Hofmann, Swiss Federal Institute of Technology, Lausanne (EPFL) and Margarethe Hofmann Amtenbrink, PhD, President of Federation of European Materials Societies, FEMS, 12 February 2015
- Organization of “Zeta Potential Measurements for Membranes” Seminar presented by Thomas Luxbacher, Product manager at Anton Paar GmbH, 30 January 2014
- Organization of “Raman Spectroscopy application on Nanotechnology” Seminar presented by Vincent Larat, Application Scientist at HORIBA Scientific, 31 October 2013.
- Organization of “Thermal Analysis and Hyphenation Technique” Seminar presented by Yogesh Satpute, Head of Perkin Elmer Application Lab - India, 28 January 2013

- **Organization and Conduction of Training Courses, workshops and conferences**

1. Organized and will conduct a training course in ‘Introduction to Nanotechnology’, Muscat, Oman (March 2019)
2. Conducted a short Seminar entitled ‘Nanotechnology: The Human Factor’, Muscat, Oman (26 November 2018)
3. Air Force Seminar November 2018
4. Organized and conducted a training course in ‘Introduction to Nanotechnology’ Muscat, Oman (11-21 March 2018)
5. Conducted a short Seminar entitled ‘Nanotechnology and its Applications’ Sohar, Oman (4 October 2016)
6. “Multidisciplinary approach of Chair in Nanotechnology in Education and Training”; in Second Gulf Forum on Nanotechnology Awareness, Muscat, Oman (28-29 December 2015) Invited Talk

3. Scholarship

a) Scholarly work

Consultancy

- Consultancy Agreement: ‘Stainless Steel Corrosion Analysis
Code: CR/DVC/WRC/17/02



Principle Investigator: **Mohammed Al-Abri**

Budget: OMR 965

Funding Agency: Oman Oil Refineries and Petroleum Industries Company (ORPIC)

Status: Completed

- Consultancy Agreement: ‘Scale Analysis’

Code: CR/DVC/WRC/17/01

Principle Investigator: **Mohammed Al-Abri**

Budget: OMR 400

Funding Agency: Oman Oil Refineries and Petroleum Industries Company (ORPIC)

Status: Completed

- Consultancy Agreement: ‘Analysis of Solids from Nimr Export Pumps’

Code: CR/ENG/PCED/17/01

Principle Investigator: **Mohammed Al-Abri**

Budget: US\$ 1,820

Funding Agency: Petroleum Development Oman (PDO)

Status: Completed

- Consultancy Agreement: ‘Technical Support to improve SWRO/BWRO’

Code: CR/ENG/PCED/14/02

Principle Investigator: **Mohammed Al-Abri**

Budget: OMR 10,000

Funding Agency: Oman Oil Refineries and Petroleum Industries Company (ORPIC)

Status: Completed (2015)

Grants

- Project Title: ‘Plasmonic alloy/semiconductor nanocomposite dye sensitized solar cells

Principle Investigator: Htet Htet Kyaw

Co-Principle Investigators: **Mohammed Al-Abri**

Budget: OMR 12,500

Funding Agency: British Petroleum Fund

Status: Submitted



- Project Title: ‘Utilization of solar light irradiation for effective photocatalytic treatment of emerging organic contaminants in water using supported ZnO nanostructures’
Principle Investigator: Jamal Al-Sabahi
Co-Principle Investigators: **Mohammed Al-Abri**
Budget: OMR 23,000
Funding Agency: British Petroleum Fund
Status: Submitted
- Project Title: ‘Microbial desalination cell for promising sustainable wastewater treatment with simultaneous recovery of resources and energy’
Principle Investigator: Gholamreza Vakili-nejad
Co-Investigators: **Mohammed Al-Abri**
Budget: OMR 32,000
Funding Agency: British Petroleum Fund
Status: Submitted
- Project Title: ‘Sustainable High Capacity Hydrogen Storage Alternative in Oman using Advanced Nanomaterials’
Principle Investigator: Gholamreza Vakili-nejad
Co-Investigator: **Mohammed Al-Abri**
Budget: OMR 111,000
Funding Agency: His Majesty Trust Fund (HMTF)
Status: Submitted
- Project Title: ‘Nanofibers from Date-Flesh and Date-Pits of Low Grade or Un-utilized Date Fruits: its preparation, characterization and functionality’
Principle Investigator: M. Shafiur Rahman
Co-Investigator: **Mohammed Al-Abri**
Budget: OMR 50,000
Funding Agency: His Majesty Trust Fund (HMTF)
Status: Submitted
- SQU-Omantel Grant: ‘Magnetic plasmonic core-shell nanostructures for photocatalysis applications’
Principle Investigator: Htet Htet Kyaw
Co-Principle Investigators: **Mohammed Al-Abri**
Budget: OMR 15,000
Status: Approved



- SQU-Omantel Grant: ‘Alternative Energy Sources Based on New Semiconductor-Modified Nanocomposites: Preparation, Photophysical Characterization, and Photovoltaic-Cell Design’
Principle Investigator: Osama Abou-Zied
Co-Principle Investigators: **Mohammed Al-Abri**
Budget: OMR 15,000
Status: Approved
- Internal Grant: ‘Photocatalytic treatment of emerging organic contaminants in water using energy’
Principle Investigator: **Mohammed Al-Abri**
Budget: OMR 12,000
Status: Approved
- SQU-Omantel Grant: ‘Photocatalytic Treatment of Produced Water’
Code: EG/SQU-OT/18/03
Principle Investigator: **Mohammed Al-Abri**
Co-Principle Investigators: Htet Htet Kyaw
Budget: OMR 30,000
Status: In Progress
- Project Title: ‘High Efficiency Dye-Sensitized Solar Cells Based on New Semiconductor-Modified Nanocomposites: Preparation, Photophysical Characterization, and Photovoltaic-Cell Design’
Code: SR/SCI/CHEM/18/01
Principle Investigator: Osama Abou Zied
Co-Principle Investigators: **Mohammed Al-Abri**
Budget: OMR 65,000
Funding Agency: His Majesty Trust Fund (HMTF)
Status: In Progress
- SQU-RSA* Collaboration Grant: ‘High flux NF/UF antifouling membranes for application in industrial wastewater purification’
Principle Investigator: **Mohammed Al-Abri**
Co-Principle Investigators: Sergey Dobretsov
Budget: OMR 8,000
Status: In Progress
- SQU-RSA* Collaboration Grant: ‘Antifouling, photocatalytic track-etched nano-filters’
Principle Investigator: Sergey Dobretsov
Co-Principle Investigators: **Mohammed Al-Abri**



Budget: OMR 8,000

Status: In Progress

- Project Title: ‘Elimination of polluted brine well-recharge using solar-powered zero-liquid discharge brackish water desalination’
Code: SR/ENG/PCED/17/01
Principle Investigator: **Mohammed Al-Abri**
Budget: OMR 75,000
Funding Agency: His Majesty Trust Fund (HMTF)
Status: In Progress
- Internal Grant: ‘Green Synthesis of Inorganic Perovskites for Energy and Environmental Applications’
Code: IG/DVC/WRC/17/02
Principle Investigator: **Mohammed Al-Abri**
Budget: OMR 30,075
Status: In Progress
- External Grant: ‘Biofouling in Oman waters and prevention of microbial and algal fouling using novel nanorod photocatalytic coatings’
Code: ORG/EBR/15/003
Principle Investigator: Sergey Dobretsov
Co-Principle Investigators: **Mohammed Al-Abri**
Budget: OMR 314,000
Funding Agency: The Research Council
Status: In Progress
- Project Title: ‘Chair in Nanotechnology for Water Desalination’
Code: CHAIR/DVC/TRC/12/01
Principle Investigator: Joydeep Dutta (*Resigned September 2015*)
Principle Investigator: **Mohammed Al-Abri** (*Since October 2015*)
Budget: OMR 2,900,000
Funding Agency: The Research Council
Status: Completed (2017)
- Project Title: ‘Nanotechnology for water treatment and solar energy applications’
Code: N62909-15-1-C121
Principle Investigator: Joydeep Dutta
Co-Principle Investigator: **Mohammed Al-Abri**
Budget: US\$ 20,216
Funding Agency: US Office of Naval Research Global, USA
Status: Completed (2015)



- Internal Grant: ‘Solar Desalination and Hot Water Production using A Falling Film Enhanced by Counter Current Air Flow’
Code: IG/ENG/PCED/15/02
Principle Investigator: Hasan Abdellatif
Co-Principle Investigators: **Mohammed Al-Abri**
Budget: OMR 7,000
Sponsor: SQU
Status: Completed (2016)
- Internal Grant: ‘Development of UF and NF membranes’
Code: IG/ENG/PCED/13/03
Principle Investigator: **Mohammed Al-Abri**
Co-Investigators: Sulaiman Al-Obaidani
Budget: OMR 9,100
Sponsor: SQU
Status: Completed (2014)
- Internal Grant: ‘Use of NF membranes for water treatment’
Code: IG/ENG/MIED/13/02
Principle Investigator: Sulaiman Al-Obaidani
Co-Principle Investigator: **Mohammed Al-Abri**
Budget: OMR 8,450
Sponsor: SQU
Status: Completed (2014)

* SQU-RSA Collaboration Grants are grants that are supported by both SQU and Republic of South Africa (RSA).

Principal Publications

- **Book Chapters**

1. Issa Sulaiman Al-Husani, Abdull Rahim Mohd Yusof, Woei-Jye Lau, Ahmad Fauzi Ismail, Mohammed Al-Abri, ‘Nanofiber Membranes for Oily Wastewater Treatment’ in ‘Nanofiber Membranes for Medical, Environmental and Energy Applications’ Ismail, Jaafar, Hilal, Wright, Taylor and Francis, in press (2019)
2. Sulaiman Al Obaidani, Mohammed Al-Abri and Nabeel Al-Rawahi, “Achieving the Zero-Liquid-Discharge Target Using the Integrated Membrane System for Seawater



Desalination” in “Recent Progress in Desalination, Environmental and Marine Outfall Systems”, M.S. Baawain, B.S. Choudri M. Ahmed, A. Purnama, (Eds.), Springer, ISBN 978-3-319-19123-2 (2015)

3. Mohammed Al-Abri, Chedly Tizaoui and Nidal Hilal, “Combined macromolecular adsorption and coagulation for improvement of membrane separation in water treatment” in “Advances in Water Treatment and Pollution Prevention”, Sanjay K. Sharma and Rashmi Sanghi (Eds.), Springer, ISBN 978-94-007-4203-1 (2012).

● **International Refereed Journal Papers**

<i>Scopus:</i>	Number of Citations	275
	h-index	10
<i>Google Scholar:</i>	Number of Citations	333
	h-index	10

Assistant Professor Publications

1. Fabrication and Thermo-Physical Characterization of Molybdenum(IV) sulfide Micro and Nanofluids: An Experimental Investigation on the Effect of Particle Size and Base Liquid
Nader Nikkam, Muhammet S. Toprak, Joydeep Dutta, Mohammed Al-Abri and Myo Tay Zar Myint
Nano-Micro Letters (Under Review)
2. Comparative toxicity evaluation of ZnO nanomaterials to aquatic species
Sergey Dobretsov, Priyanka Sathe, Tanujjal Bora, Michael Barry, Myo Myint and Mohammed Al-Abri
Environmental Science & Technology (Under Review)
3. Experimental Investigation and Modeling of the Viscosity of some Water-Based Nanofluids
G. Reza Vakili-Nezhaad, Ali Vakilinejad, Mohammad Ali Aroon, Mohammed Al-Abri, Hossein Bahmanyar, Buthayna Al-Ghafri and Myo Tay Zar Myint
Powder Technology (Under Review)
4. Chlorination disadvantages and alternative routes for biofouling control in reverse osmosis desalination
Mohammed Al-Abri, Buthayna Al-Ghafri, Tanujjal Bora, Sergey Dobretsov, Joydeep Dutta, Stefania Castelletto, Lorenzo Rosa and Albert Boretti
npj Clean Water (2019) In press



5. Synthesis, Characterization and Application of Magnetic Nanoparticles in the Removal of Copper from Aqueous solution
Mulook Thane Khamis Al Jabri, M. Geetha Devi and Mohammed Al Abri
Applied Water Science (2018) 8:223 <https://doi.org/10.1007/s13201-018-0872-x>
6. Fabrication of polyethersulfone electrospun nanofibrous membranes incorporated with hydrous manganese dioxide for enhanced ultrafiltration of oily solution
I.S.Al-Husaini, A.R.M.Yusoff, W.J.Lau, A.F.Ismail, M.Z.Al-Abri, B.N.Al-Ghafri and M.D.H.Wirzal
Separation and Purification Technology 212 (2019) 205-214
[JCR 2017/18 Impact Factor ~ 3.927]
7. Tailoring the pressure drop and fluid distribution of a capacitive deionization device
Karthik Laxman, Afzal Husain, Asma Nasser, Mohammed Al Abri, Joydeep Dutta
Desalination 449 (2019) 111-117
[JCR 2017/18 Impact Factor ~ 6.603]
8. Photocatalytic microbial removal and degradation of organic contaminants of water using PES fibers
Buthayna Al-Ghafri, Tanujjal Bora, Priyanka Sathe, Sergey Dobrestov, Mohammed Al-Abri
Applied Catalysis B: Environmental 233 (2018) 136–142
[JCR 2017/18 Impact Factor ~ 11.698]
9. Visible light photocatalytic degradation of HPAM polymer in oil produced water using supported zinc oxide nanorods
Jamal Al-Sabahi, Tanujjal Bora, Michel Claereboudt, Mohammed Al-Abri, Joydeep Dutta
Chemical Engineering Journal 351 (2018) 56-64
[JCR 2017/18 Impact Factor ~ 6.735]
10. Biodiesel production by valorizing waste Phoenix dactylifera L. kernel oil in the presence of synthesized heterogeneous metallic oxide catalyst (Mn@MgO-ZrO₂)
Jamil, Farrukh; Al-Muhtaseb, Ala'a; Myint, Myo; Al-Hinai, Mohab; Al-Haj, Lamyia; Baawain, Mahad; Al-Abri, Mohammed; Kumar, Gopalakrishnan; Atabani, A.E.
Energy Conversion and Management 155 (2018) 128-137
[JCR 2017/18 Impact Factor ~ 6.377]
11. Outlook for graphene-based desalination membranes
Albert Boretti, Stefania Castelletto, Sarim Al-Zubaidy, Miroslava Vaclavikova, Sergey Mikhalovsky, and Mohammed Al-Abri
npj Clean Water 1 (2018) 5; doi:10.1038/s41545-018-0004-z



12. Experimental and Theoretical Investigation of Thermal Conductivity of some Water-Based Nanofluids
Ali Vakilinejad, Mohammad Ali Aroon, Mohammed Al-Abri, Hossein Bahmanyar, Myo Tay Zar Myint, G. Reza Vakili-Nezhaad
Chemical Engineering Communications 205 (2018) 610-623
[JCR 2017/18 Impact Factor ~ 1.282]
13. Supported versus colloidal zinc oxide for advanced oxidation processes
Karthik Laxman, Manal Al Rashdi, Jamal Al Sabahi, Mohammed Al Abri and Joydeep Dutta
Journal of Applied Surface Science, 411 (2017) 285-290
[JCR 2015/16 Impact Factor ~3.150]
14. Antimicrobial Activity Enhancement of Polyethersulfone Membranes by In-Situ Growth of ZnO Nanorods
Muna Al Hinai, Priyanka Sathe, Mohammed Al Abri, Sergey Dobretsov, Ashraf Al Hinai, and Joydeep Dutta
ACS Omega 2 (2017) 3157–3167. DOI: 10.1021/acsomega.7b00314
15. Valorization of waste Date pits biomass for biodiesel production in presence of green carbon catalyst
Abu-Jrai, A.M., Jamil, F., Al-Muhtaseb, A.H., Baawain, M., Al-Haj, L., Al-Hinai, M., Al-Abri, M., Rafiq, S.
Energy Conversion and Management, 135 (2017) 236-243
[JCR 2015/16 Impact Factor ~4.801]
16. Valorization of waste “date seeds” bio-glycerol for synthesizing oxidative green fuel additive
Farrukh Jamil, Sandeep K Saxena, Ala'a Al-Muhtaseb, Mahad Baawain, Mohammed Al-Abri, Nagabhatla Viswanadham, Gopalakrishnan Kumar, Ahmad M Abu-Jrai
Journal of Cleaner Production 165 (2017) 1090–1096.
<https://doi.org/10.1016/j.jclepro.2017.07.216>
[JCR 2016/17 Impact Factor ~ 5.715]
17. Cleaner fuel production from waste Phoenix dactylifera L. kernel oil in the presence of a bimetallic catalyst: Optimization and kinetics study
Ala'a Al-Muhtaseb, Farrukh Jamil, Myo Tay Zar Myint, Mahad Baawain, Mohammed Al-Abri, Thi Ngoc Bao Dung, Gopalakrishnan Kumar, Mohammad N.M. Ahmad
Energy Conversion and Management 146 (2017) 195-204.
<https://doi.org/10.1016/j.enconman.2017.05.035>
[JCR 2016/17 Impact Factor ~ 5.589]
18. Adsorption studies of tamarind shell carbon in the treatment of Industrial Effluent
Majda Abdullah Ali Al-Hadi, M. Geetha Devi, Mohammed Al Abri, Anjali Prajith, Khadija Ali Al Balushi
Journal of Advanced Science, Engineering and Medicine 9 (2017) 1-7



19. Advances in diamond nanofabrication for ultrasensitive devices
Stefania Castelletto, Lorenzo Rosa, Jonathan Blackledge, Mohammed Zaher Al Abri and Albert Boretti
Microsystems & Nanoengineering 3 (2017) 17061; doi:10.1038/micronano.2017.61
20. Efficient visible light photocatalysis of benzene, toluene, ethylbenzene and xylene (BTEX) in aqueous solutions using supported zinc oxide nanorods
Jamal Al-Sabahi, Tanujjal Bora, Mohammed Al-Abri, and Joydeep Dutta
PLOS ONE 12 (2017) e0189276
[JCR 2016/17 Impact Factor ~ 2.766]
21. Fabrication and thermo-physical properties characterization of ethylene glycol—MoS₂ heat exchange fluids
Nader Nikkam, Muhammet S. Toprak, Joydeep Dutta, Mohammed Al-Abri, Myo Tay Zar Myint, Maissa Souayah and Seyed Majid Mohseni
International Communications in Heat and Mass Transfer 89 (2017) 185–189
[JCR 2016/17 Impact Factor ~ 3.718]
22. Controlled defects of zinc oxide nanorods for efficient visible light photocatalytic degradation of phenol
Jamal Al-Sabahi, Tanujjal Bora, Mohammed Al-Abri and Joydeep Dutta
Materials 9 (2016), 238
[JCR 2014/15 Impact Factor ~2.65]
23. Preparation and Characterisation of ZnO Nanoparticles
Noura A.M. Al Balushi, M. Geetha Devi, Mohammed Al Abri
Journal of Nanoscience and Technology 2 (2016) 192–194
24. Efficient desalination of brackish ground water via a novel capacitive deionization cell using nanoporous activated carbon cloth electrodes
Karthik Laxman, Myo Tay Zar Myint, Mohamed Al Abri, Laila Al Gharibi, Butheina Al Namani and Joydeep Dutta
Journal of Engineering Research 12 (2015) 22-31
25. Desalination and disinfection of inland brackish ground water in a capacitive deionization cell using nanoporous activated carbon cloth electrodes
Karthik Laxman, Myo Tay Zar Myint, Mohammed Al Abri, Priyanka Sathe, Sergey Dobretsov, Joydeep Dutta
Desalination, 362 (2015) 126-132
[JCR 2014/2015 IF 3.756]
26. Humic substance coagulation: Artificial neural network simulation
Mohammed Al-Abri, Khalid Al Anezi, Akram Dakheel and Nidal Hilal
Desalination 253 (2010) 153–15
[JCR 2014/2015 IF 3.756]



27. Combined humic substance and heavy metals coagulation, and membrane filtration under saline conditions

Mohammed Al-Abri, Akram Dakheel, Chedly Tizaoui and Nidal Hilal

Desalination 253 (2010) 46–50

[JCR 2014/2015 IF 3.756]

28. Combined humic substance coagulation and membrane filtration under saline conditions

Nidal Hilal, Mohammed Al-Abri and Hilal Al-Hinai

Desalination and Water Treatment, 1 (2009) 194-200

[JCR 2014/2015 IF 1.173]

Graduate Publications

29. Characterization and retention of NF membranes using PEG, HS and polyelectrolytes

Nidal Hilal, Mohammed Al-Abri, Hilal Al-Hinai and Mousa Abu-Arabi

Desalination, 221 (2008) 284-293

[JCR 2014/2015 IF 3.756]

30. Effects of heavy metals and polyelectrolytes in humic substance coagulation under saline conditions

Nidal Hilal, Mohammed Al-Abri, Antonio Moran and Hilal Al-Hinai

Desalination, 220 (2008) 85-95

[JCR 2014/2015 IF 3.756]

31. Combined humic substance and heavy metals agglomeration, and membrane filtration under saline conditions

Nidal Hilal, Mohammed Al-Abri, Hilal Al-Hinai and Chris Somerfield

Separation Science and Technology, 43 (2008) 1488-1506.

[JCR 2014/2015 IF 1.175]

32. Artificial neural network simulation of combined humic substance coagulation and membrane filtration

Mohammed Al-Abri and Nidal Hilal

Chemical Engineering Journal, 141 (2008) 27-34.

[JCR 2014/2015 IF 4.321]

33. Neural network modeling for separation of bentonite in tubular ceramic membranes

Nidal Hilal, Oluwaseun O. Ogunbiyi and Mohammed Al-Abri

Desalination, 228 (2008) 175-182

[JCR 2014/2015 IF 3.756]

34. Characterization and retention of UF membranes using PEG, HS and polyelectrolytes

Nidal Hilal, Mohammed Al-Abri and Hilal Al-Hinai

Desalination, 206 (2007) 568-578



[JCR 2014/2015 IF 3.756]

35. Enhanced membrane pre-treatment processes using macromolecular adsorption and coagulation in desalination plants: A review

Nidal Hilal, Mohammed Al-Abri and Hilal Al-Hinai

Separation Science and Technology, 41 (2006) 403-453

[JCR 2014/2015 IF 1.175]

• **Keynote and Invited Talks in International Conferences**

1. Nanotechnology and The Fourth Industrial Revolution, Mohammed Al-Abri, *The fourth industrial Revolution and its impact on education*, Barka, Oman 21-23 January 2019 **Invited Talk**
2. Desalination Technologies and Considerations, Mohammed Al-Abri, *Managing Water Scarcity in River Basins: Innovation and Sustainable Development*, Agadir, Morocco 4-6 October 2018 **Keynote Speaker**
3. Water Treatment using Membranes, Mohammed Z. Al-Abri, *Research and Innovative Technologies in Water Sector for the Achievement of SDG6's* Amman, Jordan 26-28 June 2018 **Invited Talk**
4. Brackish Water Desalination: Challenges and Design Considerations, Mohammed Al-Abri, *Small Desalination Units for Agriculture Sustainability: Challenges & Opportunities*, Barka, Oman 5-6 March 2018 **Invited Talk**
5. **Mohammed Al-Abri**; "Nanotechnology and Produced Water Treatment" in 2nd Middle East Oilfield Produced Water Management Conference & Exhibition, Muscat, Oman (4-15 February 2017 **Keynote Speaker**

• **International Conference Presentations**

6. Photocatalytic microbial removal and degradation of organic contaminants of water using PES fibers, Buthayna Al-Ghafri, Tanujjal Bora, Priyanka Sathe, Sergey Dobretsov, Mohammed Z. Al-Abri, *WC climate change 2018: impact and responses*, Rome, Italy, 13th- 15th September 2018
7. Mild functionalization of carbon nanotubes for improvement of filtration and antibacterial performance of polyethersulfone membranes Muna H. Al-Hinai, Priyanka Sathe, Mohammed Al-Abri, Sergey Dobretsov, Ashraf T. Al-Hinai, and Joydeep Dutta, *8th IUPAC Conference on Green Chemistry*, Bangkok, Thailand, 9- 14 September 2018, PIII-53
8. Modification of Polyethersulfone Ultrafiltration Membranes Using Nanomaterials Muna Al-Hinai, *1st Students Research Conference*, Sultan Qaboos University, Muscat, Oman, 10th April 2018



9. Brackish water desalination using capacitive de-ionization, Htet Htet Kyaw and Mohammed Al-Abri, *Small Desalination Units for Agriculture Sustainability: Challenges & Opportunities*, Barka, Oman 5-6 March 2018
10. Toward biofouling inhibition of polyethersulfone using nanomaterials Muna Al-Hinai, *3rd Omani Desalination Researchers Network Meeting & MEDRC Alumni Lecture Series, Under the topic: "Towards efficient use of water in agriculture"*, Muscat, Oman, 22nd February 2018
11. Toward Biofouling Inhibition of Poly(ether sulfone) Membranes by in Situ Growth of ZnO Nanorods Muna H. Al-Hinai, Priyanka Sathe, Mohammed Al-Abri, Sergey Dobretsov, Ashraf T. Al-Hinai, and Joydeep Dutta, *The Second GCC Marine Biotechnology Conference: Emerging Opportunities and Future Perspectives*, Muscat, Oman 31st October- 1st November, 2017
12. Ahmad Abu Jrai, Farrukh Jamil, Ala'a H. Al-Muhateb, Mahad Baawain, Lamyia Al-Haj, Mohab A. Al-Hinai and Mohammed Al-Abri,; "Utilization of waste date pits for biodiesel production in presence of green catalyst" in 2nd International Conference on Alternative Fuels: Futures and Challenge, Daegu, South Korea (23 – 25 October 2017)
13. Jamal Al-Sabahi, Tanujjal Bora, Mohammed Al-Abri and Joydeep Dutta; "Plasmonic Photocatalysis by Gold Nanoparticle Decorated Zinc Oxide Nanorods for Efficient Degradation of Pharmaceutical Wastes" in 11th edition of International Conference on Composite Science & Technology, Sharjah, UAE (4-6 April 2017)
14. Buthayna Al-Ghafri, Priyanka Sathe, Tanujjal Bora, Sergey Dobretsov and Mohammed Al-Abri; "Photocatalytic disinfection of PES membranes" in 3rd International Conference on Desalination using Membrane Technology, Gran Canaria, Spain (2-5 April 2017)
15. Priyanka Sathe, Jutta Richter, Myo Tay Zar Myint, Sergey Dobretsov, Joydeep Dutta and Mohammed Al-Abri; "Photocatalytic Zinc oxide nanocoatings: a green alternative to biocidal antifouling coatings"; in International Congress on Marine Corrosion and Fouling (18th ICMCF), Toulon, France (19-24 June 2016)
16. Karthik Laxman, Priyanka Sathe, Mohammed Al-Abri, Myo Tay Zar Myint and Joydeep Dutta; "Nanostructured carbon electrodes for deionization and disinfection of inland brackish water"; in Oman ENERGY & WATER Exhibition & Conference, Muscat, (23– 25 May 2016)
17. Muna H. Al-Hinai, Priyanka Sathe, Mohammed Al-Abri, Sergey Dobretsov, Ashraf T. Al-Hinai and Joydeep Dutta; "ZnO modified- Polyethersulfone Membranes as Biofouling Resistance in Water Treatment Applications"; in Oman ENERGY & WATER Exhibition & Conference, Muscat, (23–25 May 2016)



18. ZnO modified- Polyethersulfone Membranes as Biofouling Resistance in Water Treatment Applications, Muna H. Al-Hinai*, Priyanka Sathe, Mohammed Al-Abri, Sergey Dobretsov, Ashraf T. Al-Hinai, and Joydeep Dutta, *Oman Energy and Water Exhibition and Conference, Oman Expo 2016*, Muscat, Oman 1st-3rd May, 2016
19. Modification of Blended Polyethersulfone Membranes by in-situ growth of zinc oxide nanostructures for prevention of biofouling during Water Treatment, Muna H. Al-Hinai, Priyanka Sathe, Ashraf T. Al-Hinai, Mohammed Al-Abri, Sergey Dobretsov and Joydeep Dutta, *251st ACS National Meeting & Exposition*, San Diego, USA, 13th - 17th March, 2016
20. Nanostructures modifying polymeric membranes for water treatment applications, Muna H. Al-Hinai, Priyanka Sathe, Ashraf T. Al-Hinai, Mohammed Al-Abri, Sergey Dobretsov and Joydeep Dutta *Nanotechnology for Water Treatment and Solar Energy Applications*, Muscat, Oman, 15th - 16th December, 2015
21. Jamal N. Al-Sabahi, Tanujjal Bora, Myo Tay Zar Myint, Mohammed Al-Abri and Joydeep Dutta “Photocatalytic degradation of phenol using zinc oxide nanorods”; in *Nanotechnology for Water Treatment and Solar Energy Applications Conference*, Muscat, (15-16 December 2015)
22. Muna H. Al-Hinai, Priyanka Sathe, Ashraf T. Al-Hinai, Mohammed Al-Abri, Sergey Dobretsov and Joydeep Dutta; “Nanostructures modifying polymeric membranes for water treatment applications”; in *Nanotechnology for Water Treatment and Solar Energy Applications Conference*, Muscat, (15-16 December 2015)
23. Karthik Laxman, Myo Tay Zar Myint, Mohammed Al Abri, Priyanka Sathe, Sergey Dobretsov and Joydeep Dutta “Brackish water desalination using nanoporous activated carbon cloth electrodes in a capacitive device”, *2nd International Conference on Desalination using Membrane Technology*, Singapore Expo Convention and Exhibition Centre, Singapore (2015)
24. Mohammed Al-Abri, “Desalination processes of produced water treatment”, *Role of Produced water in sustainable Development plans of Al wusta*, Duqm, Oman (2013)
25. Mohammed Al-Abri, “Trace elements removal using nanofiltration membranes under saline conditions”, *1st International Conference on Desalination using Membrane Technology*, Sitges, Spain (2013)
26. Mohammed Al-Abri and Nidal Hilal, “Combined humic substance coagulation using PDADMAC and membrane filtration”, *1st International Conference on Desalination and Environment*, Abu Dhabi, UAE (2011)



27. Mohammed Al-Abri, “Artificial neural network simulation of membrane separation”, *Research Symposium - Water Security and Management*, Muscat, Oman (2011)
28. Nidal Hilal, Mohammed Al-Abri, Hilal Al-Hinai and Mousa Abu-Arabi “Characterization and retention of NF membranes using PEG, HS and polyelectrolytes” *Desalination and The Environment*, Halkidiki, Greece (2007)
29. Nidal Hilal, Mohammed Al-Abri, Antonio Moran and Hilal Al-Hinai “Effects of heavy metals and polyelectrolytes in humic substance coagulation under saline conditions” *Desalination and The Environment*, Halkidiki, Greece (2007)

• **Technical Reports**

1. Mohammed Al-Abri ‘Elimination of polluted brine well-recharge using solar-powered zero-liquid discharge brackish water desalination’ Approved First Year Report, Sultan Qaboos University, May 2018
2. Mohammed Al-Abri ‘Green Synthesis of Inorganic Perovskites for Energy and Environmental Applications’ Approved First Year Report, Sultan Qaboos University, January 2018
3. Mohammed Al-Abri “Chair in Nanotechnology for Water Desalination”, Fifth Year Report, The Research Council and Sultan Qaboos University, February 2017
4. Mohammed Al-Abri “Chair in Nanotechnology for Water Desalination”, Fourth Year Report, The Research Council and Sultan Qaboos University, February 2016
5. Joydeep Dutta and Mohammed Al-Abri “Chair in Nanotechnology: Proposal for the Future”, The Research Council and Sultan Qaboos University, June 2015
6. Mohammed Al-Abri “Technical Support to improve SWRO/BWRO”, Approved Final Report, Oman Oil Refineries and Petroleum Industries Company, May 2015
7. Mohammed Al-Abri and Sulaiman Al-Obaidani, “Development of UF and NF membranes”, Approved Final Report, Sultan Qaboos University Internal Grant, January 2015
8. Sulaiman Al-Obaidani and Mohammed Al-Abri, “Use of NF membranes for water treatment”, Approved Final Report, Sultan Qaboos University Internal Grant, January 2015
9. Joydeep Dutta, Mohammed Al-Abri, Salim Al-Harhi, Nabeel Al-Rawahi, Ashraf Al-Hinai and Sergey Dobretsov, “Establishment of a center of excellence in III-V



semiconductors by ITHRA”, Directorate General for Investment Promotion, December 2014

10. Mohammed Al-Abri and Sulaiman Al-Obaidani, “Development of UF and NF membranes”, Approved 1st Report, Sultan Qaboos University Internal Grant, January 2014
11. Sulaiman Al-Obaidani andMohamemd Al-Abri, “Use of NF membranes for water treatment”, Approved 1st Report, Sultan Qaboos University Internal Grant, January 2014
12. Joydeep Dutta, Mohammed Al-Abri, Abdulkhadir Elshafie, Yaseen Al-Mulla, Nabeel Al-Rawahi and Suleiman Al-Obeidani, “Budgetary cost estimate of the SQU Desalination plant in Al-Hail” Approved Report, Sultan Qaboos University, September 2012
13. Joydeep Dutta, Mohammed Al-Abri, Abdulkhadir Elshafie, Yaseen Al-Mulla, Nabeel Al-Rawahi and Suleiman Al-Obeidani, “The state of the SQU Desalination plant in Al-Hail” Approved Report, Sultan Qaboos University, June 2012
14. Anvar Kasimov, Mohammed Al-Abri, Hemesiri Kotagama, Osman Abdullah, Sulieman Al-Habsi, Abdullah Al-Habsi , Louis Blih “Evaluation and Imporvment of SQU wells” Approved Report, Sultan Qaboos University, June 2012

Laboratory and Research Facilities Establishment & Development

- Established Membrane Development Laboratory. The laboratory is used to fabricate and characterize different types of membranes. As well as, investigation of the use of commercial membranes for treatment of different sources of water i.e. seawater, brackish water, produced water and waste water
- Established Desalination and Water Treatment Lab for undergraduate and postgraduate teaching and research. The lab currently has membrane distillation, NF/RO lab-scale and bench-scale, UF dead-end cell and ceramic membranes filtration systems. All the systems were assembled in College of Engineering Laboratories, SQU.
- Actively participated in the establishment of Nanotechnology laboratory in collaboration with Chair in Nanotechnology for Desalination as a member of the technical committee representing the Chair to the Department of Petroleum and Chemical Engineering as well as in the construction, layout and equipment procurement in the laboratory
- Prepared guidelines for the operation of several equipment’s used for research of several characterization equipment’s like XRD, FTIR, particle sizing, photo-correlation spectroscopy, fluorescence spectroscopy, UV-Vis spectroscopy, surface area measurements, ICP-OES, GC-MS etc.



• Career Development

Participated in the following workshops and training courses

- Workshop on Peer Learning & Knowledge Sharing Workshop on Water Desalination, organized by MEDRC, Muscat, Oman: 28-30 January 2018
- International Training Programme on “JINR Expertise for Member States and Partner Countries”, Duna, Russia: 17-21 April 2017
- Cutting Edge Technology Showcase Event 29th October, 2017, MEDRC Headquarters, Al Hail
- Course on Advances in pre-treatment processes for desalination jointly organized by Membrane Society of Australasia and National Centre of Excellence in Desalination, Australia: 26 February 2015
- Course on Water supply and demand management jointly organized by Ministry of Foreign Affairs, Singapore and Ministry of Regional Municipalities and Water Resources, Oman: 23-25 June 2013.
- Oman Power and Water Summit 2013, Muscat, Oman, 5-7 May 2013
- Workshop on Solar Desalination organized by Middle East Desalination Research Center, Muscat, Oman: 6-8 October 2013
- Bio and Nano mechanics and applications – Short Course, Muscat, Oman: 4 December 2012.
- Water Security for Policy Makers and Practitioners – Short Course, Norwich, UK: 28 May- 1 June 2012
- Workshop on Moving Water Reuse Forward in the GCC Region co-organized by Water Desalination and Reuse Center (King Abdullah University of Science and Technology) and Arcadis/Malcolm Pirnie, 12 April 2012
- Workshop on Nuclear Power Consideration organized by IAEA and Peaceful Nuclear Technology Office in Oman, Muscat, Oman, 17-19 October 2011
- Workshop - Water Security and Transboundary Groundwater in the Arabian Peninsula, Norwich, UK: 6-7 October 2011
- Consultative Workshop on MENA Regional Desalination and Renewable Energy Nexus Study, World Bank, Muscat, Oman: 22-23 February 2011

Attended the following conferences (other than the ones participated in with poster or refereed paper)

- Conference on Drainage Rehabilitation & Flood Control, GEC Conferences, Oman, 1-2 September 2014
- Wastewater Reuse: New treatment solution with PURON® HF modules webinar, Elsevier, 16 May 2013.
- Conference on Water for Sustainable Tourism Industry, Nizwa, Oman 24-25 September 2013.



- International Conference on Drought Management Strategies in Arid and Semi Arid Regions, Ministry of Regional Municipalities and Water Resources, Muscat, Oman (2011).
- The National Strategy to Combat Salinity and Protection of Water Resources from Pollution and Salinity in Sultanate of Oman, Ministry of Agriculture and Fisheries Wealth, Muscat, Oman (2011)

b) Student/ trainee advising and supervision in scholarship

• PhD Students Supervision

- Project Title: 'Photocatalytic degradation studies on produced water from oil wells'
Student's Name: Jamal Al-Sabahi
Main Supervisor: **Mohammed Al-Abri**
Status: Graduated (November 2018)
- Project Title: 'Modification of Polyethersulfone Membranes Ultrafiltration Using Nanomaterials'
Student's Name: Muna Al-Hinai
Main Supervisor: **Mohammed Al-Abri**
Status: Graduated (November 2018)
- Project Title: 'Ultrafiltration of oily effluent using superoleophobic polyethersulfone electrospun nanofibrous membranes'
Student's Name: Issa Al-Hussaini
Co-Supervisor: **Mohammed Al-Abri**
Status: In Progress
- Project Title: 'Optimization of seawater desalination plants using exergy approach'
Student's Name: Ali Vakilinijad
Supervisor: **Mohammed Al-Abri**
Status: In Progress
- Project Title: 'Development of a solution-processed hybrid system for solar cells applications'
Student's Name: Naser Al-Shekaili
Co-Supervisor: **Mohammed Al-Abri**
Status: In Progress



• **MSc Students Supervision**

- Project Title: ‘Membrane distillation for produced water treatment’
Student’s Name: Moza Al-Salmi
Main Supervisor: **Mohammed Al-Abri**
Status: Graduated (November 2018)

- Project Title: ‘Treatment of oily produced water with Alkaline Surfactant Polymer using ceramic membrane, coagulation and floatation’
Student’s Name: Mundhir Al-Battashi
Main Supervisor: **Mohammed Al-Abri**
Status: Graduated (November 2018)

- Project Title: ‘Modeling of Rheological Behavior and Transport Properties of Thermal Nano-Fluids’
Student’s Name: Ali Vakilinijad
Co-Supervisor: **Mohammed Al-Abri**
Status: Graduated (September 2017)

- Project Title: ‘Catalytic aquathermolysis of Omani heavy crude oil using magnetic nanoparticles’
Student’s Name: Hilal Al-Ghufaili
Co-Supervisor: **Mohammed Al-Abri**
Status: Graduated (September 2017)

- Project Title: ‘Application of end-of-life RO membranes in brackish water desalination’
Student’s Name: Noor Al-Hamimi
Main Supervisor: **Mohammed Al-Abri**
Status: In Progress

- Project Title: ‘Noble-metals decorated ZnO nanoparticles as photoelectrode for dye sensitized solar cells’
Student’s Name: Salim Al-Arafati
Co-Supervisor: **Mohammed Al-Abri**
Status: In Progress

- Project Title: ‘Fabrication and characterization of titanium dioxide/polyetherimide nanocomposite nanofibers for organic contaminants separation and degradation’
Student’s Name: Buthyna Al-Ghafri
Co-Supervisor: **Mohammed Al-Abri**
Status: In Progress



- **Trainee supervision**

- Trained the following:
 - Hanaa Al-Kindi as part of her MSc Thesis requirement
 - Ismail Al-Kalbani as part of his BSc requirement
 - Sumaia Al-Hadrami (2017-current)
 - Azzan Al-Khadhori (2017-current)

- c) **Personal professional development**

- Ph.D Scholarship, Middle East Desalination Research Center, Oman (2003-2007)
- B.Eng Scholarship, Alvis Vickers plc, UK (2000-2003)
- Foundation Year Scholarship, Alvis Vickers plc, UK (1999-2000)
- His Majesty Sultan Qaboos Scholarship for Exceptional Intermediate & High School Students, Sultan Qaboos Private School, Oman (1992-1999)

- d) **Recognition in scholarship**

- **Membership of Professional Bodies**

- Member of the European Desalination Society (EDS) 2006 - present
- Member of Oman Water Society (OWS) 2011 - present
- Member of the International Water Association (IWA) 2011 – present
- Member of Membrane Society of Australasia (MSA) 2015- 2017

- **Membership of Editorial Boards**

- Member of the editorial board of Desalination, Elsevier (2010-2017)
- Member of the editorial board of Journal of Modern Applied Science, Canadian Center of Science and Education (2011-current)
- Member of the editorial board of International Journal of Water Pollution and Purification Research (2014-current)
- Member of the advisory editorial board of Sustainable Water Developments: Resources, Management, Treatment, Efficiency and Reuse, Book Series, CRC Press, Taylor & Francis Group (2013-current)

- **Reviewer in International Journals**

- Reviewer for Desalination Journal
- Reviewer for Chemical Engineering Journal
- Reviewer for Separation and Purification Technology Journal



- Reviewer for Journal of Water Process Engineering
- Reviewer for Journal of the Taiwan Institute of Chemical Engineers
- Reviewer for Journal of Chemical Technology and Biotechnology
- Reviewer for World Applied Science Journal
- Reviewer for Desalination and Water Treatment Journal
- Reviewer for Journal of Modern Applied Science
- Reviewer for Chemical Engineering Communications Journal

e) Leadership in scholarship

• Conference Organization

- Member of the Organizing Committee of “Small Desalination Units for Agriculture Sustainability: Challenges & Opportunities”, Barka, Oman 5-6 March 2018
- Main organizer of “Nanotechnology for Water Treatment and Solar Energy Applications”, Muscat, Oman, 15-16 December 2015
- Member of the Organizing Committee of “International Water Conference 2016” on “Water Resource in Arid areas: The Way Forward”, Muscat, Oman on 13-16 March, 2016
- Member of the organizing committee of World Water Day Celebration and Workshop, 23 March 2014, Muscat, Oman.

• Training Courses and workshops

- Conducted training course on “Effects of Desalination and Water Treatment on Water Resources” Al-Rustaq, Oman (5-9 February 2017)
- Conducted training workshop on “RO Desalination” MEDRC, Muscat, Oman (22-23 August 2016)

f) Impact in scholarship

• International Scientific Committee Memberships

- Member of the scientific committee of Oman Energy and Water Exhibition and Conference, Muscat, Oman (30 April – 2 May 2018)
- Member of Scientific committee of Omani Young Water Researchers Award (2018)
- Member of Scientific committee of Omani Young Water Researchers Award (2017)
- Member of the scientific committee of 3rd International Conference on Desalination using Membrane Technology, Gran Canaria, Spain (2-5 April 2017)



- Member of the scientific committee of International Egyptian American Conference on Green Chemistry, Cairo, Egypt (2018)
- Member of the scientific committee of 2nd International Conference on Desalination using Membrane Technology, Doha, Qatar (2016)
- Member of the scientific committee of Oman Energy and Water Exhibition and Conference, Muscat, Oman (23-25 May 2016)
- Member of the scientific committee of 2nd International Conference on Desalination using Membrane Technology, Singapore Expo Convention and Exhibition Centre, Singapore (2015)
- Member of the International Scientific Committee of International conference on Desalination, Environment and Marine Outfall Systems, Muscat, Oman (2014)
- Member of the scientific committee of 1st International Conference on Desalination using Membrane Technology, Sitges, Spain (2013)
- Member of Capacity Building Task Force for Middle East and North Africa Network of Water Centers of Excellence (2013-current)
- Member of International Water Association Task Force - Water Quality: Water 'Fit for Purpose' (2014)
- Member of the scientific committee of 1st International Conference on Desalination and Environment (2011)
- International Advisory Committee of The Sixth Jordan International Chemical Engineering Conference (2011)
- Top Reviewer of Desalination Journal in 2010

- **Technical Committee Memberships**
 - Member of the current state of Al-Hail facilities study committee, Sultan Qaboos University, Oman (2012).
 - Member of SQU wells evaluation and improvement study Committee, Sultan Qaboos University, Oman (2011-2012).

- **Project Peer Reviewer**
 - Reviewer of Scientific Research Proposals for The Research Council (TRC), Oman

- **Chair/ Session Chair of International Conferences**
 - Participate in the round table discussion of the 4th Science and Technology Exchange Program (STEP), Muscat, Oman 2-5 December 2019
 - Session Chair of 3rd International Conference on Desalination using Membrane Technology, Gran Canaria, Spain (2-5 April 2017)



- Session Chair of Oman Energy and Water Exhibition and Conference, Muscat, Oman (23-25 May 2016)
- Session Chair of 2nd International Conference on Desalination using Membrane Technology, Singapore Expo Convention and Exhibition Centre, Singapore (26-29 July 2015)
- Session Chair of 1st International Conference on Desalination using Membrane Technology, Sitges, Spain (2013)
- Session Chair or Role of Produced water in sustainable Development plans of Al Wusta Seminar, Duqm, Oman (2013)
- Session Chair of 1st International Conference on Desalination and Environment, Abu Dhabi, UAE (2011)

4. University and Community Service

a) Participation in university and community service activities

- Active interaction with the Society of Chemical Engineering (Scheme) of SQU by supervising some of their projects.
- Supervising projects from Society of Engineering (SE)
- Conceived and built lab-scale membrane filtration and a modular RO and NF pilot plant, SQU for the training of students and engineers interested to learn the major desalination technology used worldwide

b) Participation in areas other than those directly related to research and teaching and learning activities

- Member of the Directory of Research Scientists in Member Centers, Middle East and North Africa Network of Water Centers of Excellence (MENA NWC), United States Agency for International Development (USAID), USA

c) Scholarship in university and community services

- Letter of Appreciation from Ministry of Regional Municipalities and Water Resources for conducting a training course in “Effects of Desalination and Water Treatment on Water Resources” Al-Rustaq, Oman (5-9 February 2017)
- Letter of Appreciation from Al-Wadaq Office for Training Services for conducting a training course in “Effects of Desalination and Water Treatment on Water Resources” Al-Rustaq, Oman (5-9 February 2017)
- Letter of Appreciation from Oman Water Society for conducting a training workshop on “RO Desalination” MEDRC, Muscat, Oman (22-23 August 2016)
- Letter of Appreciation from Oman Water Society for contributing in organizing a Seminar on “Role of Produced water in sustainable Development plans of Al wusta”, 2013



- Letter of Appreciation from Editor-in-Chief, Al-Roya Newspaper for participating in the Judge Panel of “Vision Award for Youth Initiatives (Enjaz)”, 2013
- Letter of Appreciation from Minister of Education for contributing in the “Cognitive development Program”, 2012

d) Popularization, dissemination and simplification of knowledge

- Presented a paper on nanotechnology in the Fourth Industrial Revolution, 21 to 23 of January 2019. <http://www.omandaily.om/665103/>
- Published an article on “Membrane Technology for Water Treatment” in Ministry’s of Education Cognitive development Magazine, (2019) In Press
- Participated in open forum discussion on Fourth Industrial Revolution organized by Oman Chamber of Commerce and Industry (09 June 2018)
- Judge panel of “Cognitive development Program”, Ministry of Education, (April 2018)
- TV interview on Economic Vision Program <https://www.youtube.com/watch?v=v30Jop7O19I> (20 March 2018)
- F
- Radio interview on Sustainable Architecture program in Oman, “Nanotechnology and its construction applications” https://www.youtube.com/watch?v=eJdSEal_fgk
- Presented in Omantel annual executive meeting “Introduction to Nanotechnology” (01 November 2017) **Invited Talk**
- Organized a special edition on Nanotechnology in Tawasul Magazine published by Oman Observer Newspaper and Sultan Qaboos University (December 2017)
- Mohammed Al-Abri; “Water Desalination” in World Water Day, Al-Rustaq, Oman (29 March 2017) **Invited Talk**
- Mohammed Al-Abri; “Water Treatment and Desalination Technologies”; in World Water Day Celebration, Al-Rustaq (24 March 2016) **Invited Talk**
- Published an article on “Helium” in Ministry’s of Education Cognitive development Magazine, (2014)
- Member of the Judge Panel of “Vision Award for Youth Initiatives (Enjaz)”, Al Roya Newspaper (2013)
- Interviewed in Oman Observer Newspaper, Broader perspectives in nanotechnology, 16 December 2013
- Judge Panel of “Big Science Challenge”, British Council (2011-2012)
- Conducted a Seminar on Water Challenges in Oman as part of “Big Science Challenge”, British Council (2011)
- Judge panel of “Cognitive development Program”, Ministry of Education, (2012)
- Article on “Forward Osmosis” in Ministry’s of Education Cognitive development Magazine, (2011)



- Conducted a Workshop on Water Treatment for Intermediate and High School Students (2011)

e) Serving in administrative positions and committee membership / chairmanship

Departmental Activities

- Chair of the department's Industrial Outreach and Community Services (2015-present)
- Department's In-house Industrial Training Coordinator (2008-2009, 2012-2014, 2016-current).
- Department's Book and Library Coordinator (2008-2013).
- Department's Health, Safety and Environment (HSE) Committee (2013-2014).
- Member, Unit Operations focus group.

College Activities

- Member of College Board (2015-2018)
- Member of Pre-specialization Academic Unit (PAAU) (2015-2018)
- Member of College Alumni Committee (2013-current)
- Member of College HSE Committee (2009-2010, 2012-2013)
- Member of College Textbook Committee (2011-2013)
- Member of College Computer Committee (2010-2012).
- Participated in the College of Engineering Retreat Day "Towards A Successful Road Map For Postgraduate Programs & Research" held on March 25, 2010
- Took part in the College of Engineering Retreat Day held on 20th November 2008 to discuss and approve the 2008-2011 College implementation plan

Administrative Services

- Director of Nanotechnology Center (2017-current)
- Member of SQU Operational Plan Follow-Up for Research Center Committee (2017-current)
- Technical Committee of Chair in Nanotechnology for Desalination and other uses, Sultan Qaboos University, Oman (2011-2017)
- Steering Committee of Water Research Centre, Sultan Qaboos University, Oman (2009-Current)
- Acting Chair in Nanotechnology for Water Desalination (5 August – 10 September 2015)
- Acting Head, Department of Petroleum and Chemical Engineering (9 March – 13 March 2013)

f) Other information



- Hold a certificate as an Innovation Specialist after completing Industrial Innovation Program organized by Industrial Innovation Center, Ministry of Commerce and Industry (December 2017- March 2018)
- Completed training course on Product Design and Development organized by Industrial Innovation Center, Ministry of Commerce and Industry (May 2018)