

## Curriculum Vitae

### Personal Information

Date of Birth and Place 12.02.1974 in Ar-Rabba, Jordan

Marital Status Married

Nationality German



### Education

04/2002 **Ph.D. Chemistry**, Universität Tübingen, Tübingen, BW, Germany

9/1995 – 6/1998 **M.Sc. Chemistry**, The University of Jordan, Amman, Jordan

9/1991 – 06/1995 **B.Sc. Chemistry**, Mu'tah University, Kerak, Jordan

### Work Experience

9/2021 – present **Dean of scientific research** at the German Jordanian University

9/2021 – present **Member of the promotion and appointment committee at German Jordanian University**

12/2017 – present **Full Professor**, Pharmaceutical and Chemical Engineering Department-School of Applied medical Sciences (SAMS), German Jordanian University.

4/2012 – 12/2017 **Associate Professor**, Pharmaceutical and Chemical Engineering Department-School of Applied medical Sciences (SAMS), German Jordanian University.

10/2008 – Present **Exchange Coordinator**, Pharmaceutical and Chemical Engineering Department-SAMS, German Jordanian University.

9/2015 – 10/2016 **Visiting Professor**, Membrane and Sustainable Desalination Research Group, Department of Chemical and Environmental Engineering, Masdar Institute of Science and Technology, UAE.

6/2013 – 9/2015 **Vice Dean, School of Applied Medical Sciences**, German Jordanian University.

9/2013 – 3/2014 **Visiting professor**, Institute of Molecular and Technical Medicine at Furtwangen University of Applied Sciences, Germany.

10/2014 **Visiting Professor**, Department of Chemistry and Biochemistry, Oxford University, Oxford, UK, "Protein crystallography", Prof. Schofield.

6/2007 – 7/2007 **Visiting Scientist**, University of California, Berkeley, USA "Total synthesis of morphine derivative", Prof. Peter Vollhard.

6/2006 – 9/2006 **Visiting Scientist**, University of Tübingen, Faculty of Pharmacy, Germany "Biomarkers", Prof. Machulla group.

2/2006 – 9/2009 **Establishing Head of Department**, Pharmaceutical and Chemical Engineering Department-SAMS, German Jordanian University.

10/2005 – 4/2012 **Assistant Professor**, Pharmaceutical and Chemical Engineering Department-SAMS, German Jordanian University.

2/2004 – 9/2005 **Scientific position**, Research Institute of Molecular Pharmacology (FMP), Department of Medicinal Chemistry, Berlin, Germany.

10/2002 – 1/2004 **Postdoctoral position**, Institute of Chemical Technology, Stuttgart University, Stuttgart, Germany

5/2002 – 9/2002 **Postdoctoral position**, graduate college Graduiertenkolleg 'Chemie in Interphasen' at Universität Tübingen, Tübingen, Germany.

**Scholarships and Awards**

2021	Innovation Leaders of Pomerania and Kuyavia, Poland 2021- Special award in the category of Academia for the most innovative and original solution "By nature for materials science - biomimetic separation materials"
2020	Award from Federation of Scientific and Technical Associations, Toruń Poland for innovative and original invention "Smart materials – Hybrid separation materials based on polyvinylidene fluoride (PVDF) with chemically attached chitosan"
2019	Innovation Leaders of Kuyavian-Pomeranian Region, Poland in 2019– award for the best academic innovation "Smart materials – Hybrid separation materials based on polyvinylidene fluoride (PVDF) with chemically attached chitosan"
6/2017 – 9/2017	DFG fellow, BioMEMS & Sensors NMI Naturwissenschaftliches und Medizinisches Institut an der Universität Tübingen, "Glucose sensors" Dr. Martin Stelzle.
2011/2012	<b>Excellent Teaching Award</b> , German-Jordanian University, Amman, Jordan.
2012	<b>HRH Prince Hassan Award</b> , (with others) for the Photovoltaic Desalination Project in Jordan Valley.
6/2012 – 9/2012	<b>DAAD fellow</b> , Center for Bioinformatics Saar, university of Saarbrücken, Germany "Efflux pumps", Prof. Helms group.
6/2010 – 9/2010	<b>DFG fellow</b> , Institute of Medicinal Chemistry, University of Leipzig, Germany "New polymers for solid phase peptide synthesis", Prof. Jörg Rademann group.
6/2009 – 9/2009	<b>DFG fellow</b> , Research Institute of Molecular Pharmacology, Berlin, Germany "Biological nano-vehicle", Prof. Jörg Rademann group.
6/2008 – 9/2008	<b>DFG fellow</b> , Research Institute of Molecular Pharmacology, Berlin, Germany "High loaded Cross-linked Polyvinylamine micro-beads as a novel supporting material towards Solid-Phase Peptide Synthesis and polymeric reagents" Jörg Rademann group.
2002	<b>The Graduate College (Chemie in interphases)</b> , Universität Tübingen, Germany.

**Memberships**

7/2017 – Present	NAMS - North American Membrane Society. European Membrane Society
09/2019 - Present	Polish Membrane Society
07/2018 - Present	European Membrane Society
6/2017	Member of the scientific committee of the 5 <sup>th</sup> International Scientific Conference on Pervaporation, Vapor permeation and Membrane Distillation Reviewer for many scientific journals

**Research interest**

Multidisciplinary research interest to integrate chemistry, chemical biology, and bioinformatics to design novel materials for health applications in particular continuous glucose monitoring sensors. Moreover, I am working on the development of smart membrane for the separation of glucose molecules to increase sensor selectivity and sensitivity.

<b>Funded Research Projects</b>	<ul style="list-style-type: none"> <li>- 3-dimensional modification of the nanoarchitecture of polymeric membranes based on PVDF through chemical attachment of chitosan Smart materials – intelligent separation materials on an activated polymer substrate with a defined nano-surface architecture” Incubator of Innovation + Polish Ministry of Science and Higher Education <b>25000 USD</b></li> <li>- "Smart materials" - magnetic hybrid separation materials with controlled properties - formation, biomimicry, characterization, and application, 2018 (co-investigator), National Science Centre Poland <b>273000 USD</b></li> <li>- Biomimetic membranes for selective glucose transport based on functionalized carbon nanotubes, 2017, <b>7000 USD</b></li> <li>- Solidification of hazardous wastes and industrial water treatment using inorganic polymerization techniques, 2011, <b>124000 USD</b></li> <li>- Development and utilization of solar driven water pumping and desalination units for the application in the remote area in Jordan, 2010 – 2015, <b>273000 USD</b></li> <li>- Utilization of oil Shale as a source of energy in Jordan; direct burning and shale oil Extraction Phase I, 2010, <b>352000 USD</b></li> <li>- Synthesis of peptides and peptidyl precursor for PET (Positron Emission tomography) biomarkers, 2008, <b>6000 USD</b></li> <li>- 3D protein structure prediction, <b>17000 USD</b></li> </ul>
<b>Expertise in</b>	<ul style="list-style-type: none"> <li>- <b>SEM</b>, Scanning electron microscopy</li> <li>- <b>TEM</b>, Transmission electron microscopy</li> <li>- <b>AFM</b>, Atomic Force Microscopy</li> <li>- <b>IR &amp; Raman</b>, infrared and Raman spectroscopy</li> <li>- <b>NMR</b>, Nuclear magnetic resonance liquid and solid state MAS-NMR</li> <li>- <b>HTS</b>, high-throughput-screening for drug discovery</li> <li>- Membrane characterization laboratory, porosity, permeability, tensile strength, etc.</li> <li>- HPLC-MS, GC-MS</li> <li>- Confocal microscopes and Elisa readers</li> <li>- Light scattering for particle size determination</li> </ul>
<b>Teaching</b>	<p><u>Training course</u> “Write a winning proposal” an intensive training course. I was assigned by the higher council of science and technology in Jordan to train the academic staff how to find and apply to several international funding agencies.</p> <p><u>Graduate courses</u> Advanced NMR course, graduate student, FMP Berlin, Germany Gene and protein therapy, Jordan university of science and technology, Jordan</p> <p><u>Under graduate courses</u> General Chemistry, Medicinal Chemistry, Pharmaceutical Organic Chemistry, Organic Chemistry, Biochemistry, Analytical Chemistry, Physical Chemistry, Graduation Projects</p>
<b>Industrial Experience</b>	<p>2014 <b>Faculty for factory program</b>, Automatic mixing and filling of ultrasound gels and other paramedical products according to GMP regulations, SANDRA corporation, Amman, Jordan. Part time consultation, (continuity).</p> <p>2012 <b>Faculty for factory program</b>, Automatic mixing and filling of ultrasound gels and other paramedical products according to GMP regulations, Medical Scientific and Chemical corporation, Amman, Jordan. Part time consultation.</p> <p>2011 <b>Faculty for factory program</b>, Development of Novel technology Coats, King Abdullah Design and Development Bureau, Zarqa, Jordan. Part time consultation.</p> <p>2010 <b>Faculty for factory program</b>, Design and development of locally available natural materials for wastewater treatment in food processing industry, Nabil Company for Food Products, Amman, Jordan. Part time consultation.</p>

2009	<b>Faculty for factory program</b> , Diagnosis and characterization of the active compound in the Tonigrow and investigate its mechanism of action, The Jordanian Pharmaceutical Manufacturing Co. (Plc) (JPM), Naour, Jordan. Part time consultation.
2007	<b>Faculty for factory program</b> , Development of novel insulating paints from local natural resources, International coatings and specialist, Sahab, Jordan. Part time consultation.
<b>Industrial training</b>	<b>Offering training for several oil and fertilizers companies in Gulf Counties, e.g. good laboratory practice, good manufacturing practice, ISO training, sampling, industrial sensors, etc.</b>
<b>University Service</b>	<p>The German Jordanian University was established in 2005, and I had the honor to participate in this project from the early begging, I am the 7th staff member appointed at that time. I had and still having a lot of duties concerning establishing the university in particular issues related to the school of applied medical sciences where laboratories are still under construction. Here is a list of some duties that I was involved in:</p> <p>University strategies and operations, 2005  Participating in preparing the permanent location of the university in Madaba  Preparing and working on general university tenders  Member of the university council for the year 2006, 2014  Establishment of the chemical-pharmaceutical engineering program  Initiating the program study plan, courses, and laboratory materials  Setup laboratories, machines, and instrumentations  Design and run the experiments for undergraduate students  Insure local training of the students  Member of different committees at the university</p> <p><b>Exchange officer and coordinator for the department</b></p> <ul style="list-style-type: none"> <li>Select partner universities in Germany and prepare MOU's with</li> <li>Prepare, select, and distribute our students to join one of the partner universities</li> <li>Follow-up students in their academic semester in Germany</li> <li>Support students in their internship training in one of the German industries</li> <li>Prepare course credit equivalency for our returnee students from Germany</li> <li>Coordinating flying faculty program which aims to invite German professors to give lectures at GJU</li> </ul> <p>School council for academic years 2013/2014, 2014/2015, 2015/2016 and 2016/2017  School study plan committee  School accreditation committee  School faculty recruitment committee  School scientific research committee  School promotion committee member  Organizing network meeting with the German partners  German year committee  School appointment committee  School curriculum committee  Laboratory safety committee  Laboratory furnishing committee</p>

**Patents**

1. **Samer Al-Gharabli**, Joanna Kujawa, Wojciech Kujawski, A method for producing hybrid hydrophobic-hydrophilic fluoropolymer separation materials, national patent application [WIPO ST 10/C PL432070], submitted December (2019)
2. **Samer Al-Gharabli**, Joanna Kujawa, Wojciech Kujawski, Eyad Hamad, Activation methods of inert polymeric material, particularly fluoropolymers, international patent application **WIPO ST 10/C PL.428315, [PCT/PL2018/000129] PCT patent**, submitted October (2018)
3. **Samer Al-Gharabli**, Joanna Kujawa, Wojciech Kujawski, Surface Nano-modification of separation materials to improve transport, separation, and anti-fouling properties, **WIPO ST 10/C PL428333, [PCT/PL2019/050077] PCT patent**, submitted October (2018).

**International prizes achieved for the patents**

*Innovation Leaders of Pomerania and Kuyavia, Poland 2021 (website: <https://liderzy.tarr.org.pl/>)*

*Special award in the category of Academia for the most innovative and original solution "By nature for materials science - biomimetic separation materials"*

*Awards of the 12th International Invention Fair in the Middle East, Kuwait 16-19.02.2020 for "A method for producing hybrid hydrophobic-hydrophilic fluoropolymer separation materials" and "Activation methods of inert polymeric material, particularly fluoropolymers"*

- gold medals of the expo;

*Awards of the International Invention & Trade Expo 2019 (London, UK).*

For the "Smart materials" - intelligent separation materials on an activated polymer substrate with defined surface nanoarchitecture "was granted with three awards:

- gold medal of the expo;
- the Diamond Special Award;
- the special prize of the World Association for Intellectual Property and Invention (WIIPA Special Award).

*The invention of "Smart materials", was showered with awards during the gala of the prestigious 7th Macao International Innovation and Invention Expo 2019 (10-13.10.2019)*

- gold medal of the expo;

**Publications**

- a special prize of the Organizers for the invention, which can support the reactivation of the "Silk Road" initiative called "Best Belt and Road Initiative Award" (cup)

**Publications (H-index: 16, citation numbers: 930 – according to Scopus)**

1. S. Al-Gharabli, Z. Flanc, K. Pianka, A. P. Terzyk, W. Kujawski, J. Kujawa, *Porcupine quills-like-structures containing smart PVDF/chitosan hybrids for anti-fouling membrane applications and removal of hazardous VOCs*, Chemical Engineering Journal 452 (2023) 139281 - Open Access (**IF = 16.7**)
2. Mohammed O.J.Azzam, Samer I.Al-Gharabli, Fadi F.Alrawash, Air gap membrane distillation applied to olive mill wastewater, Journal of Environmental Chemical Engineering 10 (2022) 108465 (**IF = 7.968**)
3. J. Kujawa, M. Zięba, W. Zięba, S. Al-Gharabli, W. Kujawski, A. Terzyk, Hedgehog-like structure, PVDF-carbon nanohorn hybrid membranes for improved removal of VOCs from water (2022) Chemical Engineering Journal, 438 (2022) 135574 - Open Access (**IF = 16.7**)
4. S. Al-Gharabli, Z. Abu El-Rub, E. M. Hamad, W. Kujawski, Z. Flanc, K. Pianka, W. Jankowski, J.Kujawa, Toward anti-fouling properties and enhanced performance in separation process - carbon nanotubes - PVDF hybrids, Applied Surface Science (2022) 154341 - Open Access (**IF = 7.4**)
5. E. M.Hamad, S. Al-Gharabli, J. Kujawa, Tunable hydrophobicity and roughness on PVDF surface by grafting to mode – approach to enhance membrane performance in membrane distillation process, Separation and Purification Technology 291 (2022) 120935 - Open Access (**IF = 9.1**)
6. E. Korczeniewski, P. Bryk, S. Koter, P. Kowalczyk, M. Zięba, M. Łepicka, K. J. Kurzydłowski, K.H. Markiewicz, A. Z.Wilczewska, W. Kujawski, S. Boncel, S. Al-Gharabli, M. Świdziński, D. J. Smoliński, K. Kaneko, J. Kujawa, A. P. Terzyk, Are Nanohedgehogs Thirsty? Toward New Superhydrophobic and Anti-Icing Carbon Nanohorn-Polymer Hybrid Surfaces, Chemical Engineering Journal 446 (2022) 137126 - Open Access (**IF = 16.7**)

7. M. Zięba, T. Rusak, T. Misztal, W. Zięba, N. Marcińczyk, J. Czarnecka, S. Al-Gharabli, J. Kujawa, A. P. Terzyk, Nitrogen plasma modification boosts up the hemocompatibility of new PVDF-carbon nanohorns composite materials with potential cardiological and circulatory system implants application, *Biomaterials Advances* 138 (2022) 212941 - Open Access (IF = 7.3)
8. Science, news release, Desert beetle: help for the drying planet, <https://www.eurekalert.org/news-releases/740189>
9. Kujawa, J., Głodek, M., Li, G., Al-Gharabli, S., Knozowska, K., Kujawski, W. Highly effective enzymes immobilization on ceramics: Requirements for supports and enzymes (2021) *Science of the Total Environment*, 801 (IF = 10.7)
10. Al-Gharabli, S., El-Rub, Z.A., Hamad, E., Kujawski, W., Flanc, Z., Pianka, K., Kujawa, J. Surfaces with adjustable features—effective and durable materials for water desalination (2021) *International Journal of Molecular Sciences*, 22 (21) (IF = 6.2)
11. Kujawa, J., Zięba, M., Zięba, W., Al-Gharabli, S., Kujawski, W., Terzyk, A.P. Carbon nanohorn improved durable PVDF membranes - The future of membrane distillation and desalination (2021) *Desalination*, 511, (IF = 11.2)
12. Kujawa, J., Al-Gharabli, S., Muzioł, T.M., Knozowska, K., Li, G., Dumée, L.F., Kujawski, W. Crystalline porous frameworks as nano-enhancers for membrane liquid separation – Recent developments (2021) *Coordination Chemistry Reviews*, 440, (IF = 24.8)
13. Al Hujran, T.A., Magharbeh, M.K., Al-Gharabli, S., Haddadin, R.R., Al Soub, M.N., Tawfeek, H.M. Studying the complex formation of sulfonatocalix[4]naphthalene and meloxicam towards enhancing its solubility and dissolution performance (2021) *Pharmaceutics*, 13 (7) (IF = 6.2)
14. Al-Gharabli, S., Kujawa, J. Molecular activation of fluoropolymer membranes via base piranha treatment to enhance transport and mitigate fouling – new materials for water purification (2021) *Journal of Membrane Science*, 624, (IF = 10.5)
15. Kujawa, J., Al-Gharabli, S., Wrzeszcz, G., Knozowska, K., Lagzdins, R., Talik, E., Dziedzic, A., Loulergue, P., Szymczyk, A., Kujawski, W. Physicochemical and magnetic properties of functionalized lanthanide oxides with enhanced hydrophobicity (2021) *Applied Surface Science*, 542 (IF = 7.4)
16. **S. Al-Gharabli\***, B. Al-Omari, W. Kujawski, J. Kujawa How can the desert beetle and biowaste inspire hybrid separation materials for water purification? – *ACS Applied Materials and Interfaces* 13(9) (2021) 11268 (IF = 10.4) (2021)
17. J. Kujawa, **S. Al-Gharabli**, G. Wrzeszcz, K. Knozowska, R. Lagzdins, E. Talik, A. Dziedzic, P. Loulergue, A. Szymczyk, W. Kujawski, *Physicochemical and magnetic properties of functionalized lanthanide oxides with enhanced hydrophobicity*, *Applied Surface Science* 542 (2021) 148563 - (impact factor = 7.4)
18. J. Kujawa, M. Głodek, I. Koter, B. Ośmiałowski, K. Knozowska, **S. Al-Gharabli**, L. F. Dumée, W. Kujawski, *Molecular Decoration of Ceramic Supports for Highly Effective Enzyme Immobilization - Material Approach*, *Materials* 2021, 14, 201 - Open Access (IF = 3.7)
19. **S. Al-Gharabli\***, B. Al-Omari, W. Kujawski, J. Kujawa, *Biomimetic hybrid membranes with covalently anchored chitosan – Material design, transport and separation*, *Desalination* 491 (2020) 114550 (IF = 11.2)
20. Z. Abu El-Rub, J. Kujawa, **S. Al-Gharabli**, *Pyrolysis Kinetic Parameters of Omari Oil Shale Using Thermogravimetric Analysis*, *Energies* 13(16) (2020) 4060 (IF = 3.2)
21. J. Kujawa, W. Kujawski, S. Cerneaux, G. Li, **S. Al-Gharabli\***, *Zirconium dioxide membranes decorated by silanes based-modifiers for membrane distillation – Material chemistry approach*, *Journal of Membrane Science* 596 (2020) 117597 (IF = 10.5)
22. Z. Abu El-Rub, J. Kujawa, E. Albarahmeh, N. Al-Rifai, F. Qaimari, **S. Al-Gharabli\***, *High Throughput Screening and Characterization Methods of Jordanian Oil Shale as a Case Study*, *Energies* 12(16) (2019) 3148 (IF = 3.2)
23. J. Kujawa, W. Kujawski, A. Cyganiuk, L. F. Dumée, **S. Al-Gharabli\***, *Upgrading of zirconia membrane performance in removal of hazardous VOCs from water by surface functionalization*, *Chemical Engineering Journal* 374 (2019) 155-169 (impact factor = 16.7)
24. Z. Abu El-Rub, E. Bramer, **S. Al-Gharabli**, G. Brem, *Impact of Char Properties and Reaction Parameters on Naphthalene Conversion in a Macro-TGA Fixed Char Bed Reactor*, *Catalysts* 2019, 9(4), 307 (IF=4.5)
25. E. M. Hamad; **S. I. Al-Gharabli**; J. A. McLaughlin, *Sensitivity Enhancement of Point-of-Care for Cardiac Markers Detection using Micro-Impedimetric Immunosensor Arrays*, *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS 2019*, 8857546, 1119-1122
26. E. M. Hamad; B. Sawalmeh; A. Al Mhawsh; M. Mansour; M. Awad, A. T. Al-Halhouli, **S. I. Al-Gharabli**, *Investigation of Bifurcation Effect on Various Microfluidic Designs for Blood Separation*, *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS 2019*, 8856380, 1097-1100

27. E. M. Hamad, G. Hawamdeh, N. Abu Jarrad, O. Yasin, **S.I. Al-Gharabli**, R. Shadfan, *Detection of Human Chorionic Gonadotropin (hCG) Hormone using Digital Lateral Flow Immunoassay*, Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS **2018**, 8513355, 3845-3848
28. **S. Al-Gharabli\***, E. Hamad, M. Saket, Z. Abu El-Rub, H. A. Arafat, W. Kujawski, J. Kujawa, *Advanced material - ordered nano-tubular ceramic membrane covalently capped with single wall carbon nanotubes*, Materials **(2018)** (**impact factor = 3.7**)
29. **S. Al-Gharabli\***, W. Kujawski, Z. Abu El-Rub, E. M. Hamad, J. Kujawa, *Enhancing membrane performance in removal of hazardous VOCs from water by modified fluorinated PVDF porous material*, Journal of Membrane Science 556 **(2018)** 214-226 (**impact factor = 10.5**)
30. T. A. Agbaje, **S. Al-Gharabli**, M. O. Mavukkandy, J. Kujawa, H. A. Arafat, *PVDF/magnetite blend membranes for enhanced flux and salt rejection in membrane distillation*, Desalination 436 **(2018)** 69–80. (**impact factor = 11.2**).
31. Elizalde, C. N. B.; **Al-Gharabli**, S.; Kujawa, J.; Mavukkandy, M.; Hasan, S. W.; Arafat, H. A., *Fabrication of blend polyvinylidene fluoride/chitosan membranes for enhanced flux and fouling resistance*. Separation and Purification Technology 190 **(2018)** 68-76. (**impact factor = 9.2**)
32. **Al-Gharabli, S.**; Kujawa, J.; Mavukkandy, M. O.; Agbaje, T. A.; Hamad, E. M.; Arafat, H. A., *Covalent surface entanglement of polyvinylidene fluoride membranes with carbon nanotubes*. European Polymer Journal. 100 **(2018)** 153-164. (**impact factor = 5.5**)
33. **Al-Gharabli, S.**; Mavukkandy, M. O.; Kujawa, J.; Nunes, S. P.; Arafat, H. A., *Activation of PVDF membranes through facile hydroxylation of the polymeric dope*, Journal of Material Research 32 **(2017)** 4219-4231. (**impact factor = 2.9**)
34. **S. Al-Gharabli**, J. Kujawa, M. O. Mavukkandy, H. A. Arafat, *Functional groups docking on PVDF membranes: Novel Piranha approach*, European Polymer Journal, 96 **(2017)** 414-428 (**IF = 5.5**).
35. **S. Al-Gharabli**, W. Kujawski, H. A. Arafat, J. Kujawa, *Tunable separation via chemical functionalization of polyvinylidene fluoride membranes using piranha reagent*, Journal of Membrane Science 541 **(2017)** 567-579 (**impact factor = 10.5**).
36. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, K. Knozowska, *Molecular grafting of fluorinated and non-fluorinated alkylsiloxanes on various ceramic membrane surfaces for the removal of VOCs applying vacuum membrane distillation*, ACS Applied Materials & Interfaces, 9 **(2017)** 6571-6590 (**impact factor = 10.2**).
37. M.O. Mavukkandy, M.R. Bilad, J. Kujawa, **S. Al-Gharabli**, H.A. Arafat, *On the effect of fumed silica particles on the structure, properties and application of PVDF membranes*, Separation and Purification Technology 187 **(2017)** 365-373 (**impact factor = 9.2**).
38. S. Chakraborty, S. Loutatidou, G. Palmisano, J. Kujawa, M. O. Mavukkandy, **S. Al-Gharabli**, E. Curcio, H. A. Arafat *Photocatalytic hollow fiber membranes for the degradation of pharmaceutical compounds in wastewater* Journal of Environmental Chemical Engineering 5 **(2017)** 5014–5024 (IF = 7.9).
39. E.M. Hamad, N.A. Rawashdeh, M.F. Khanfar, E.N. Al-Qasem, **S.I. Al-Gharabli**, *Neural network based prediction of 3D protein structure as a function of enzyme family type and amino acid sequences* Jordan Journal of Biological Sciences 10 **(2017)** 73-78 (IF = 0.2).
40. L.H. Tahtamouni, R.N. Abdellatif, R.A. Al-Khateeb, Z.A Al-Mazaydeh, S.R. Yasin, **S. I. Al-Gharabli**, A.Z. Elkarmi, *Inhibitory effect of Taraxacum officinale L (Compositae) aqueous root extract on spermatogenesis*, Tropical Journal of Pharmaceutical Research 16 **(2017)** 109-118 (IF = 0.659).
41. **S. Al-Gharabli**, P. Engeßer, D. Gera, S. Klein, T. Oppenlände, *Engineering of a highly efficient Xe<sub>2</sub>\*-excilamp (xenon excimer lamp,  $\lambda_{max}$ =172 nm,  $\eta$ =40 %) and qualitative comparison to a low-pressure mercury lamp (LP-Hg,  $\lambda$ =185/254 nm) for water purification*, Chemosphere 144 **(2017)** 811–815. (IF = 8.9)
42. A. Al-Halhouli, H. Qitouqa, N. Malkosh, A. Shubbak, **S. Al-Gharabli**, E. Hamad, *LEGO Mindstorms NXT for elderly and visually impaired people in need: A platform*, Technology and Health Care 24 **(2016)** 579-585 (IF = 0.8).
43. L. Tahtamouni, R. Al-Khateeb, R. Abdellatif, Z. Al-Mazaydeh, S. Yasin, **S. Al-Gharabli**, A. Elkarmi, *Anti-spermatogenic activities of Taraxacum officinale whole plant and leaves aqueous extracts*, Veterinary Research Forum 7 **(2016)** 89-97.
44. **S. Al-Gharabli**, M. Azzam, M. Addous, *Microwave-Assisted Extraction of Shale Oil from Jordanian Oil Shale*, Oil Shale Journal 32 **(2015)** 240 – 251 (IF = 0.85)



45. B.I. El-Eswed, R.I. Yousef, M. Alshaaer, I. Hamadnehd, **S.I. Al-Gharabli**, F. Khalili *Stabilization/solidification of heavy metals in kaolin/zeolite based geopolymers*, International Journal of Mineral Processing, 137 (2015) 34–42 (IF = 2).
46. **S. Al-Gharabli**, S. Al-Agtash, N. Rawashdeh, K. Barqawi, *Artificial Neural Networks for Dihedral Angles Prediction in Enzyme Loops: a Novel Approach*, International Journal of Bioinformatics Research and Applications 11 (2015), 153 – 163 (IF = 1).
47. M.O.J. Azzam, **S.I. Al-Gharabli**, M.S. Al-Harashsheh, *Olive mills wastewater treatment using local natural Jordanian clay*, Desalination and Water Treatment 53 (2015) 627-636 (IF = 1.2).
48. E. Chebouat, B. Dadamoussa, **S. Gharabli**, N. Gherraf, M. Allaoui, A. Cheriti, A. Lahham, A. Zellagui *Assessment of antimicrobial activity of flavonoids extract from Ephedra alata*, Der Pharmacia Lettre, 6 (2014) 27-30 (IF = 2).
49. M. Allaoui, A. Cheriti, **S. Al-Gharabli**, N. Gherraf, E. Chebouat, B. Dadamoussa, A. Al-Lahham, A *Comparative Study of the Antibacterial Activity of Two Chenopodiaceae: Haloxylon scoparium (Pomel) and Traganum nudatum Del*, Research Journal of Pharmaceutical, Biological and Chemical Sciences, 5 (2014), 85-89 (IF = 0.35).
50. A. El-Dahshan, **S. I. Al-Gharabli**, S. Radetzki, T. H. Al-Tel, P. Kumar, J. Rademann, *Flexible, polymer-supported synthesis of sphingosine derivatives provides ceramides with enhanced biological activity*, Bioorganic & Medicinal Chemistry 22 (2014) 5506-5512 (IF = 3.4).
51. Ahsanullah, **S. I. Al-Gharabli**, J. Rademann, *Soluble Peptidyl Phosphoranes for Metal-Free, Stereoselective Ligations in Organic and Aqueous Solution*, Organic Letters 14 (2012) 14–17 (IF = 6.0).
52. L. Zhua, S. Georgea, M. F. Schmidt, **S. I. Al-Gharabli**, J. Rademann, R. Hilgenfeld, *Peptide aldehyde inhibitors challenge the substrate specificity of the SARS-coronavirus main protease*, Antiviral Research, 92 (2011) 204–212 (IF = 5.9).
53. R. M Obaidat, K. Sweidan, W.Al-Rajab, M. Khanfar, R. Abu-Hwajj, Y. Al-Hiari, **S. Al-Gharabli**, *Development of local, mucoadhesive, sustained release patches of tetracycline hydrochloride for treatment of mouth infections: a preliminary in vitro study*, European Journal of Parenteral & Pharmaceutical Sciences 15 (2010) 87-94 (IF = 0.42).
54. **S. Al-Gharabli**, N. Al-Rifai, H. A. Saadeh, I. M. Mosleh, M. S. Mubarak, *Solid Phase Synthesis and Antiparasitic Activity of a Library of Peptidyl Metronidazoles*, Jordan Journal of Chemistry 5 (2010) 139-147.
55. R. Ghanem, H. Baker, M. Abu Seif, R. A. Al-Qawasmeh, A. Mataneh, **S. I. Al-Gharabli**, *Photochemical Transformation of Colchicine: Kinetic Study*, Journal of Solution Chemistry 39 (2010) 441-456 (IF = 1.0).
56. **S.I. Al-Gharabli**, *Determination of Glucose Concentration in Aqueous Solution Using ATR-WT-IR Technique*, Sensors, 9 (2009) 6254-6260 (IF = 3.5).
57. A. Monem M. Rawashdeh1, M. I. El-Barghouthi, K. I. Assaf, **S. I. Al-Gharabli**, *Complexation of N-Methyl-4-(p-Methyl Benzoyl)- Pyridinium Methyl Cation and its Neutral Analogue by Cucurbit[7]uril and  $\beta$ -Cyclodextrin. A Computational Study*, Journal of Inclusion Phenomena Macrocyclic Chemistry 64 (2009) 357–365 (IF = 1.1).
58. **S. Al-Gharabli**, S. T. Ali Shah, J. Rademann, S. Weik, *An efficient method for the synthesis of peptide aldehyde libraries employed in the rational evolution of SARS-protease inhibitors*, ChemBioChem 7 (2006) 1048-1055 (IF = 2.6).
59. I. Warad, **S. Al-Gharabli**, A. Al-Labadic, A. Abu-Rayyanb *Synthesis, characterization and NMR studies of novel hemilabile neutral and dicationic palladium(II) complexes:  $Pd(\eta^2-Ph_2PCH_2CH_2OCH_3)_2$  and  $Pd(\eta^1-Ph_2PCH_2CH_2O-CH_3)_2$ diamine by using ether-phosphine ligand.*, Journal of Saudi Chemical Society 9 (2005) 507-518 (IF = 2.5).
60. R. J. Abdel-Jalil, M. Khanfar, **S. Al-Gharabli**, M. El-Abadelah, K. Eichele, M. Usman Anwer, W. Voelter *High Throughput Synthesis of Pyrazolopyrimidines via Copper-Catalysed Cyclization and X-ray Study*, Heterocycles 65(2005) 1821-1827 (IF = 1.2).
61. R. J. Abdel-Jalil, M. Khanfar, K. Abu-Safieh, **S. Al-Gharabli**, M. El-Abadelah, W. Voelter, *An Efficient One-Pot Synthesis of Pyrazolopyrimidines, Intermediates for Potential Phosphodiesterase Inhibitors*, Monatshefte fuer Chemie 136 (2005) 619-624 (IF = 1.5).



62. E. Lindner, **S. Al-Gharabli**, I. Warad, H. A. Mayer, S. Steinbrecher, E. Plies, M. Seiler, H. Bertagnolli, *Supported organometallic complexes. XXXVI. Diaminediphosphineruthenium(II) interphase catalysts for the hydrogenation of  $\alpha,\beta$ -unsaturated ketones*, Zeitschrift fuer Anorganische und Allgemeine Chemie 629 (2003) 161-171 (IF = 1.2).
63. C. Nachtigal, **S. Al-Gharabli**, K. Eichele, E. Lindner, H.A. Mayer, *Structural Studies of an Array of Mixed Diamine Phosphine Ruthenium(II) Complexes*, Organometallics, 21 (2002) 105-112 (IF = 3.8).
64. E. Lindner, **S. Al-Gharabli**, H.A. Mayer, *Supported organometallic complexes Part 31: diaminediphosphineruthenium(II) precursor complexes for parallel synthesis in interphases*, Inorganica Chimica Acta 334 (2002) 113-121 (IF = 2.3).
65. K. A. K. Ebraheem, M.S. Mubarak, **S.I. Al-Gharabli**, *Synthesis and chelation properties of some new mannich condensation polymers containing a salicylaldehyde group*, Journal of Macromolecular Science, Pure and Applied Chemistry A 39 (2002) 217-229 (IF = 1.9).
66. V. Krishnan, M. Seiler, M. P. Feth, I. Warad, **S. Al-Gharabli**, E. Lindner, H. Bertagnolli. *EXAFS investigations on diamine(diphosphine) and diamine(ether-phosphine) ruthenium(II) complexes*, HASYLAB Annual Report 2002.
67. **S. I. Al-Gharabli**, K.A.K Ebraheem, M. S. Mohammad, *Synthesis and chelation properties of a new copper selective Mannich polymer containing a 2,4-dihydroxybenzaldehyde group*, Journal of Saudi Chemical Society 5 (2001) 399-406 (IF = 3.5).

### Conferences

1. J. Kujawa, K. Knozowska, W. Kujawski, **S. Al. Gharabli**, Ceramic membranes activation via Piranha reagent– a facile way for significant enhancement in membrane performance, Euromembrane, 20-24.11.2022 Sorrento, Italy – oral presentation
2. J. Kujawa, W. Kujawski, **S. Al. Gharabli**, Magnetic hybrid separation materials with controlled properties – covalently modified PVDF with lanthanides oxide particles, Euromembrane, 20-24.11.2022 Sorrento, Italy - poster
3. J. Kujawa, W. Kujawski, **S. Al. Gharabli**, Potential of PVDF-chitosan hybrids in water purification contaminated by pharmaceuticals – paracetamol, Euromembrane, 20-24.11.2022 Sorrento, Italy - poster
4. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, Bio-mimicked surfaces with adjustable nanoarchitecture – new efficient separation materials with mitigated fouling, 5th International Conference on Applied Surface Science, 25-28.04.2022 Palma, Mallorca (Spain) - oral presentation
5. J. Kujawa, **S. Al-Gharabli**, Synergy between roughness and material chemistry to enhance transport and separation features of PVDF-based bio-hybrid separation materials, 5th International Conference on Applied Surface Science, 25-28.04.2022 Palma, Mallorca (Spain) - poster
6. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, From petal-like to lotus-like materials – functionalized rare metal oxides as novel fillers for membrane-bases separation materials, 5th International Conference on Applied Surface Science, 25-28.04.2022 Palma, Mallorca (Spain) - poster
7. J. Kujawa, **S. Al-Gharabli**, - Tools of Material Engineering for Designing Membrane Materials with Desired Features, 9th Jordan International Chemical Engineering Conference, 12-14.10.2021 Amman, Jordan - invited lecture
8. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, Roughness and Material chemistry - Synergy Toward PVDF-based Hybrid Separation Materials with Improved Features, Membrane Materials - Modification and Separation (M3-S) Conference, 6-8.09.2021 Toruń (Poland) - oral presentation
9. J. Kujawa, B. Al-Omari, **S. Al-Gharabli**, W.Kujawski, *Hybrid polymeric membranes with chemically attached chitosan for separation of multicomponent liquid systems containing non-volatile components*, International Congress on Membranes & Membrane Processes 2020, London (UK) – oral presentation (on-line conference)
10. **S. Al-Gharabli**, J. Kujawa, W.Kujawski, *Hybrid materials based on activated and functionalized PVDF substrate as potential new medical materials*, International Congress on Membranes & Membrane Processes 2020, London (UK) – oral presentation (on-line conference)
11. J. Kujawa, B. Al-Omari, **S. Al-Gharabli**, W.Kujawski, *Separation of multicomponent liquid systems containing non-volatile components by new type of polymeric membranes*, 1-4.12.19, Perth (Australia) 4th International Conference on Desalination using Membrane Technology - oral presentation - international conference
12. **S. Al-Gharabli**, J. Kujawa, B. Al-Omari, W.Kujawski, *Chemical integration of hydrophilic chitosan in PVDF membrane as an enhancer for the membrane distillation process*, Perth (Australia) 1-4.12.2019,

- 4th International Conference on Desalination using Membrane Technology - oral presentation - international conference
13. J. Kujawa, W. Kujawski, **S. Al-Gharabli**, *Hybrid polymeric materials with controlled properties for water purification by removal of hazardous VOCs*, XV Polish Membrane School, Wrocław (Poland) 21-22.09.2019 - poster - international conference
  14. **S. Al-Gharabli**, E. Hamad, W. Kujawski, J. Kujawa, *Novel hybrid materials based on functionalized PVDF for water purification processes*, XV Polish Membrane School, Wrocław (Poland) 21-22.09.2019 - poster - international conference
  15. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, *Upgraded membrane performance in membrane distillation by chemical modification with carbon nanotubes*, 6th International Scientific Conference on Pervaporation, Vapor Permeation, Gas Separation, and Membrane Distillation, Toruń (Poland) 14-17.05.2019 - oral presentation - international conference
  16. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, *Native and chemically decorated rare-earth metal oxides as a novel separation materials*, 6th International Scientific Conference on Pervaporation, Vapor Permeation, Gas Separation, and Membrane Distillation, Toruń (Poland) 14-17.05.2019 - poster - international conference
  17. B. Al-Omari, J. Kujawa, **S. Al-Gharabli**, W. Kujawski, *PVDF membrane development and modification for membrane distillation*, 6th International Scientific Conference on Pervaporation, Vapor Permeation, Gas Separation, and Membrane Distillation, Toruń (Poland) 14-17.05.2019 - poster - international conference
  18. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, *Insight into rare-earth metal oxide functionalization – generation of hybrid superhydrophobic materials*, 6th International Conference on Multifunctional, Hybrid and Nanomaterials, Sitges (Spain) 11-15.03.2019 - poster, international conference
  19. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, *Modification of fluorinated PVDF porous material – from molecular grafting to upgrading transport and separation features*, 6th International Conference on Multifunctional, Hybrid and Nanomaterials, Sitges (Spain) 11-15.03.2019 - poster, international conference
  20. **S. Al-Gharabli**, J. Kujawa, W. Kujawski, E. Hamad, Z. Abu El-Rub, *CNT-PVDF - hybrid materials for membrane-based separation*, 6th International Conference on Multifunctional, Hybrid and Nanomaterials, Sitges (Spain) 11-15.03.2019 - poster, international conference
  21. E. Hamad, G. Hawamdeh, N. Abu Jarad, O. Yasin, **S. Al-Gharabli** “*Detection of Human Chorionic Gonadotropin (hCG) Hormone Using Digital Lateral Flow Immunoassay*”, 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Honolulu, HI 17-21.07.2018 IEEE EMBC-18. (oral presentation and conference paper)
  22. J. Kujawa, W. Kujawski, A. Cyganiuk, **S. Al-Gharabli**, “*Properties of hydrophobized zirconia membranes in vacuum membrane distillation*”, XII Scientific Conference “Membranes and Membrane Processes in Environmental Protection” 52-53, ISBN 978-83-7880-544-1, Gliwice 2018, Poland
  23. J. Kujawa, W. Kujawski, A. Cyganiuk, **S. Al-Gharabli**, “*Properties of hydrophobized zirconia membranes in vacuum membrane distillation*”, XII Scientific Conference “Membranes and Membrane Processes in Environmental Protection” MEMPEP 2018, Zakopane, Poland, 13 – 16.06.2018 – (oral presentation)
  24. **S. Al-Gharabli**, J. Kujawa, W. Kujawski, E. M. Hamad, “*How surface functionalization can influence membrane performance?*”, Euromembrane 2018, Valencia (Spain) 9-13.07.2018 – (poster presentation)
  25. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, Z. Abu El-Rub, E. M. Hamad, “*Fluorinated membranes, activated by Piranha reagent and grafted with fluoralkylsilanes and alkylsilanes for the removal of hazardous VOCs*”, Euromembrane 2018, Valencia (Spain) 9-13.07.2018 – (oral presentation)
  26. T. A. Agbaje, **S. Al-Gharabli**, J. Kujawa, H. A. Arafat “*Synthesis of blend PVDF-magnetite membranes for applications in membrane distillation*” 10th International Desalination Workshop, Busan (Korea) 22-25.11.2017 (oral presentation)
  27. **S. Al-Gharabli**, W. Kujawski, J. Kujawa “*Smart materials based on activated PVDF for water purification*” 14th Membrane School, Wilga/Warsaw (Poland) 22-25.10.2017 (poster presentation)
  28. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, H. Arafat “*Piranha activated PVDF membranes towards novel separation properties, characterization and application*” 11th International Congress on Membranes and Membrane Processes, San Francisco (USA) 29.07 – 4.08.2017 (poster presentation)
  29. **S. Al-Gharabli**, M. Saket, E. Hamad, H. Arafat, W. Kujawski, J. Kujawa “*Ordered nano-tubular ceramic membrane covalently capped with carbon nanotubes for selective separation of biological active compounds*” 11th International Congress on Membranes and Membrane Processes, San Francisco (USA) 29.07 – 4.08.2017 (poster presentation)

30. **S. Al-Gharabli**, J. Kujawa, M. Mavukkandy, T. Agbaje, E. Hamad, H. Arafat "*Covalent surface entanglement of single walled carbon nanotube on polyvinylidene fluoride membranes*" 11th International Congress on Membranes and Membrane Processes, San Francisco (USA) 29.07 – 4.08.2017 (oral presentation)
31. T. Agbaje, **S. Al-Gharabli**, J. Kujawa, H. Arafat "*Synthesis of PVDF membranes with magnetic nanoparticles for applications in membrane distillation*" 11th International Congress on Membranes and Membrane Processes, San Francisco (USA) 29.07 – 4.08.2017 (poster presentation)
32. **S. Al-Gharabli**, E. Hamad "*Development of novel insulating paints from local natural resources*" XI Copernican International Young Scientists Conference, Torun (Poland) 28 – 30.06.2017 (poster presentation)
33. E. M. Hamad, **S. Al-Gharabli** "*Microfluidic blood separation: enhancement of channel design, modeling and simulation*" XI Copernican International Young Scientists Conference, Torun (Poland) 28 – 30.06.2017 (poster presentation)
34. J. Kujawa, **S. Al-Gharabli**, W. Kujawski, H. A. Arafat "*Tunable Separation in Membrane Distillation by Chemical Functionalization of Polyvinylidene fluoride Membranes Using Piranha Reagent*" 5th International Scientific Conference on Pervaporation, Vapor Permeation and Membrane Distillation, Torun (Poland) 20 – 23.06.2017 (keynote lecture)
35. H. A. Arafat, **S. Al-Gharabli**, J. Kujawa, M. O. Mavukkandy "*Functional Groups Docking on PVDF Membranes Using a Novel Piranha - Reaction Approach*" International Conference Engineering With Membranes (EWM2017) - Recent Advances in Membrane Science and Technology InterContinental, Singapore 26-28.04.2017 (oral presentation).
36. **S. Al-Gharabli**, J. Kujawa, M. O. Mavukkandy, H. A. Arafat, "*Novel activation techniques of PVDF flat sheet membranes*" 2017 MRS Spring Meeting & Exhibit - Emerging Membrane Materials for Sustainable Separations, Phenix, Arizona (USA), 18 -21.04.2017, (oral presentation - invited talk).
37. M. O. Mavukkandy, **S. Al-Gharabli**, J. Kujawa, S. Chakraborty, H. A. Arafat "*Chemical modification of poly(vinylidene fluoride) for hydrophilicity fine-tuning and anchoring sites creation on microporous membranes*" 16th Aachener Membran Kolloquium, AMK2016, Aachen (Germany), 2-3.11.2016 (poster).
38. C. N. Baeza Elizalde, **S. Al-Gharabli**, J. Kujawa, S. Chakraborty, H. A. Arafat "*Integration of hydrophilic chitosan in PVDF membrane as enhancer for direct contact membrane distillation*" 16th Aachener Membran Kolloquium, AMK2016, Aachen (Germany), 2-3.11.2016 (poster).
39. **S. Al-Gharabli** "*Reversible polymeric nano-beads as a dynamic gene delivery vehicle in cancer therapy*" Second Arab American Frontiers Symposium in Muscat (Oman) 13-15.12.2014 (oral presentation).
40. **S. Al-Gharabli**, Z. Abu El-Rub, M. Khanfar "*High throughput screening of oil content in Jordanian oil shale using ATR-FTIR and refractive index techniques*" The Seventh Jordan International Chemical Engineering (JICHe 07) Conference, Amman (Jordan) 4-6.11.2014 (oral presentation).
41. R. Abdel-Jalil, M. Al-Nuaimi, **S. Al-Gharabli**, "*CuCl<sub>2</sub>-assisted oxidative cyclization of amidrazones derivatives*" American Institute of Chemical Engineers (AIChE) San Francisco (USA) November, 2006 (oral presentation).
42. **S. Al-Gharabli**, M. Khanfar, J. Rademann, "*Microwave - Assisted Syntheses of Peptide Isostere Libraries Employing Amino Acyl Ketenes*" Journal of Peptide Science, 10(s2), 1-85, 184. 3<sup>rd</sup> International and 28<sup>th</sup> European Peptide Symposium, Prague (Czech Republic) 5-10.09.2004 (oral presentation).