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### Education

2010-2015	<b>Doctor of Philosophy, Chemistry, Jacobs University Bremen, Germany</b> Ph.D. degree in Chemistry/ <i>Special Distinction</i> <i>Driving Forces for Supramolecular Encapsulation in Water</i>
2006-2009	<b>Master of Science, Chemistry, The Hashemite University, Zarqa, Jordan</b> M.Sc. degree in Chemistry <i>Molecular Dynamics Simulation of Cucurbiturils and their Inclusion Complexes in</i>
2003-2006	<b>Bachelor of Science, Chemistry, The Hashemite University, Zarqa, Jordan</b> B.Sc. degree in Chemistry

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### Research Experience

2018-present	<b>Al-Balqa Applied University, Jordan</b> Chemistry Department Assistant Professor
2018-present	<b>Jacobs University Bremen, Germany</b> Visiting Scientist
2015-2018	<b>Jacobs University Bremen, Germany</b> Postdoctoral fellow and Lecturer Department of Life Sciences and Chemistry Prof. Dr. Werner M. Nau
2013-2014	<b>University of Jyväskylä, Jyväskylä, Finland</b> Visiting scientist in the group of Prof. Dr. Kari Rissanen XRD solving and refining structures of single-crystals

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### Teaching Experience

2018-present	<b>Assistant Professor, Al-Balqa Applied University, Jordan</b>
2015-2018	<b>Research Associate, Jacobs University, Bremen, Germany</b>
2010-2015	<b>Teaching Assistant, Jacobs University, Bremen, Germany</b>
2007-2008	<b>Teaching Assistant, The Hashemite University, Zarqa, Jordan</b>

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### Awards and Special Achievements:

2015	Scholarship from the COST Action CM1005 for the final scientific meeting of the COST Action ‘Supramolecular Chemistry in Water’, Prague, Czech Republic
2013	Scholarship from the COST Action CM1005 for a short-term scientific mission at



2013	University of Jyväskylä, Prof. Dr. Kari Rissanen research group
2013	Scholarship from the Gesellschaft Deutscher Chemiker (GDCh) for the SupraChem2013 conference, Münster, Germany
2010-2014	Scholarship from the COST Action CM1005 for the European Winter school on physical organic chemistry (e-WISPOC 2013)
2006-2009	Ph.D. scholarship from DAAD
	M.Sc. scholarship from the Hashemite University, Zarqa, Jordan

#### Academic Memberships:

2010-2018	Member of the Deutscher Chemiker (GDCh)
2007-present	Member of the Jordanian Chemical Society

#### Recent Publications

1	Khaleel I. Assaf,* Husam Abed alfattah, Ala'a F. Eftaiha, Sanaa K. Bardaweel, Mohammad A. Alnajjar, Fatima A. Alsoubani, Abdussalam K. Qaroush, Musa I. El-Barghouthi and Werner M. Nau. Encapsulation of ionic liquids inside cucurbiturils. <i>Org. Biomol. Chem.</i> , 2020, 18, 2120-2128.
2	Khaleel I. Assaf,* Josef Holub, Eduard Bernhardt, Josep M. Oliva-Enrich, M. Isabel Fernández Pérez, Moisés Canle López, J. Arturo Santaballa, Jindřich Fanfrlík, Drahomír Hnyk, Werner M. Nau. Face-Fusion of Icosahedral Boron Hydride Increases Affinity to gamma-Cyclodextrin: closo,closo-[B <sub>21</sub> H <sub>18</sub> ] <sup>-</sup> as an Anion with Very Low Free Energy of Dehydration. <i>ChemPhysChem</i> . 2020, 21, 971-976.
3	Khaleel I. Assaf,* Barbara Begaj, Angelina Frank, Mohamed Nilam, Ali S. Mougharbel, Ulrich Körtz, Jan Nekvinda, Bohumír Grüner, Detlef Gabel, Werner M. Nau. High-Affinity Binding of Metallacarborane Cobalt Bis(dicarbollide) Anions to Cyclodextrins and Application to Membrane Translocation. <i>J. Org. Chem.</i> , 2019, 18, 11790. (Featured on inside cover page)
4	Debapratim Das, Khaleel I. Assaf, Werner M. Nau. Applications of Cucurbiturils in Medicinal Chemistry and Chemical Biology. <i>Front. Chem.</i> , 2019, 7, 619.
5	Steven J. Barrow, Khaleel I. Assaf, Aniello Palma, Werner M. Nau, Oren A. Scherman. Preferential Binding of Unsaturated Hydrocarbons in Aryl-bisimidazolium-cucurbit[8]uril Complexes Furbishes Evidence for Small-molecule pi-pi Interactions. <i>Chem. Sci.</i> 2019, 10, 10240-10246. (Featured on inside cover page)
6	Khaleel I. Assaf,* Abdussalam K. Qaroush, Farah M. Mustafa, Fatima Alsoubani, Thomas M. Pehl, Carsten Troll, Bernhard Rieger, Ala'a F. Eftaiha. Biomaterials for CO <sub>2</sub> Harvesting: From Regulatory Functions to Wet Scrubbing Applications. <i>ACS Omega</i> , 2019, 47, 11532.
7	Ala'a F Eftaiha, Farah Mustafa, Fatima Alsoubani, Khaleel I. Assaf and Abdussalam K. Qaroush. A Catecholamine Neurotransmitter: Epinephrine as a CO <sub>2</sub> Wet Scrubbing Agent. <i>Chem. Commun.</i> 2019, 55, 3449.
8	Khaleel I. Assaf and Werner M. Nau, The Chaotropic Effect as an Assembly Motif in Chemistry. <i>Angew. Chem. Int. Ed.</i> , 2018, 57, 13968.
9	Khaleel I. Assaf,* Mohammad A. Alnajjar and Werner M. Nau. Supramolecular Assemblies through Host-Guest Complexation between Cucurbiturils and an Amphiphilic Guest Molecule. <i>Chem. Commun.</i> 2018, 54, 1734-1737.
10	Khaleel I. Assaf, Merve S. Ural, Fangfang Pan, Tony Georgiev, Svetlana Simova, Kari Rissanen, Detlef Gabel, Werner M. Nau. Water Structure Recovery in Chaotropic Anion Recognition: High-Affinity Binding of Dodecaborate Clusters to gamma-Cyclodextrin, <i>Angew. Chem. Int. Ed.</i> , 2015, 54, 6852-6856. (Featured on the cover page)



11	Tung-Chun Lee, Elina Kalenius, Alexandra I. Lazar, Khaleel I. Assaf, Nikolai Kuhnert, Christian H. Grün, Janne Jänis, Oren A. Scherman and Werner M. Nau. Chemistry inside Molecular Containers in the Gas Phase, <i>Nat. Chem.</i> , 2013, 5, 376-382. (Featured on the cover page)
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#### Conferences/ Workshops/ Seminars:

2018	3 <sup>rd</sup> SPP 1807 Summer School, Hamburg, Germany Control of London dispersion interactions in molecular chemistry Dispersion Interactions in the Gas Phase: Supramolecular Host-Guest Complexation as a Molecular Balance ( <b>Oral Presentation</b> )
2016	ICREA Conference on Functional Nanocontainers, Tarragona, Spain Dimerization of Cyclopentadiene Made Fast inside a Molecular Container. ( <b>Flash Presentation and Poster</b> )
2015	The 4 <sup>th</sup> International Conference on Cucurbiturils, Tianjin, China. Title: Acceleration of an Intermolecular Diels-Alder Reaction inside the Cavity of Cucurbit[7]uril. ( <b>Oral Presentation</b> )
2015	The 4 <sup>th</sup> Jordanian Chemical Conference, Al-albait University, Mafraq, Jordan. Title: The Chaotropic Effect: A Generic Driving Force for Anion Complexation. ( <b>Oral Presentation</b> )
2015	The Final Scientific Meeting of the COST Action ‘‘Supramolecular Chemistry in Water’’, Prague, Czech Republic. Title: The Chaotropic Effect Drives Dodecaborate Anions into Cyclodextrin with Micromolar Affinities. ( <b>Oral Presentation</b> )
2013	European-Winter School on Physical Organic Chemistry (E-WISPOC), Bressanone, Italy, January. Title: Formation of Host-Guest Complexes of Cucurbit[7]uril and Hydrocarbons in Aqueous Solution. ( <b>Poster Presentation</b> )
2011	The 2 <sup>nd</sup> International Conference on Cucurbiturils- ICCB 2011, Cambridge, United Kingdom. Title: Cucurbiturils: Volumes of the Inner Cavity and Packing Coefficients of Guest Binding. ( <b>Poster Presentation</b> )

#### Supervised Doctoral & Master Theses:

2020	Master <b>Aya Faraj (M.Sc.)</b> , Spectroscopic Studies on the Interaction of Selected Drugs with Some Macrocyclic Molecules
2020	<b>Ibrahim Okasha (M.Sc.)</b> , Chemisorption of CO <sub>2</sub> through Different Compounds and Reaction Pathways

#### Research Grants

2020	Carbon dioxide capture through carboxylation reactions of ketones (Al-Balqa Applied University – Deanship for Scientific Research), 5000 JD
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