

# Maysoon Ismael Saleh

Full-time Lecturer, College of Science, Chemistry Department, The University of Jordan

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<https://scholar.google.com/citations?user=GDLub9cAAAAJ&hl=en>

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## Professional Experience

<b>Feb. 2024 – Now</b>	<b>Lecturer (full-time), The University of Jordan</b> (Amman, Jordan)
<b>Oct. 2022 – Feb. 2024</b>	<b>Postdoctoral Researcher, Alfaisal University</b> (Riyadh, Saudi Arabia)
<b>Oct. 2021 – June 2022</b>	<b>Part-time Lecturer, University of Jordan</b> (Amman, Jordan)
<b>Jun. 2017 – Dec. 2020</b>	<b>Ph. D. Candidate, German Federal Institute for Materials research, and testing (BAM), division 1.2</b> (Berlin, Germany)
<b>Oct. 2013 – Mar. 2017</b>	<b>Research Assistant, Freie Universität Berlin with the research group of Prof. Dr. Christina Graf</b> (Berlin, Germany)
<b>Aug. 2009 – Aug. 2013</b>	<b>Chemistry Teacher, GCE/IGCSE curriculum</b> <b>The Jubilee School-King Hussein Foundation</b> (Amman, Jordan)
<b>Aug. 2008 – Jun. 2009</b>	<b>Chemistry Teacher, GCE/IGCSE curriculum</b> <b>The Islamic Educational College</b> (Amman, Jordan)
<b>Oct. 2005 – Jun. 2008</b>	<b>Teaching Assistant, The Hashemite University</b> (Zarqa, Jordan)

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## Education

<b>Jun. 2017 – Dec. 2020</b>	<b>Freie Universität Berlin (Germany)</b> <b>Ph.D in Chemistry</b> Thesis title: “ <i>Upconversion Nanoparticles: Stability, Surface Modification and Dye Sensitization</i> ” <b>Magna cum Laude</b>
<b>Oct. 2005 – May.2008</b>	<b>The Hashemite University (Zarqa – Jordan)</b> <b>M.Sc. Degree in Chemistry</b> Thesis Title: “ <i>The Use of Raw and Partially Pyrolyzed Olive-Related Lignocellulosic Material in Pre-concentration of Metal Ions Prior to Flame Atomic Absorption Spectroscopic Determination</i> ”
<b>Oct. 2001 – Jun. 2005</b>	<b>The Hashemite University (Zarqa – Jordan)</b> <b>B.Sc. Chemistry</b>
<b>Aug. 2000 – Jul. 2001</b>	<b>Al-Ittihad Secondary School (Amman – Jordan)</b> <b>Tawjihi (high school)</b>

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## Academic Experience

**While working at the German Federal Institute for Materials research and testing (BAM)**

Supervision a student during her experimental work and Master thesis writing:

- **Shu Wang**, Master thesis (In English): “*Influence of surface coating on the dissolution and stability of lanthanide-based nanoparticles*”. Submitted in **April 2019**.

#### **While working at the Freie Universität Berlin**

Supervision of three Bachelor students during their experimental work and thesis writing:

- **Marten Hollauer**, Bachelor thesis (in German): “*Synthese und Charakterisierung von Upconversion Nanopartikeln*”. Submitted in **April 2015**.
- **Sabrina Weihe**, Bachelor thesis (in German): “*Synthese und Charakterisierung von Rhodamin-Silika-Upconversion-Nanopartikeln zur Detektion von Quecksilber*”. Submitted in **September 2015**.
- **Yanyan Chen**, Bachelor thesis (In English): “*Optimization of the Coating Process of Upconversion Nanoparticles with Silica*”. Submitted in **February 2016**.
- **Sangitha Rages**, Bachelor thesis (in German): “*Influss des pH-Werts auf die Ausbildung einer Siliciumdioxidschicht auf Upconversion-Nanopartikeln*”. Submitted in **June 2016**.
- **Kamal Khalidi**, four weeks research internship. Working on the synthesis of reproducible and monodisperse gold coated (micro- and mesoporous silica nanoparticles). **July-August 2016**.

#### **While pursuing my master’s study at the Hashemite University as part of a scholarship:**

Teaching the following courses to undergraduates:

- General Practical Chemistry
- Practical Analytical Chemistry
- Practical Instrumental Methods of Analysis
- Practical Inorganic chemistry

Other responsibilities such as: having weekly office hours to help BSc. Students in their studies, surveillance on exams and being a member of the organizing committee for conferences and workshops held at and/or organized by the Chemistry department at the Hashemite University.

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#### **Publications**

1. Abdussalam K. Qaroush, **Maysoon I. Saleh**, Hatem M. Alsayouri, Malyuba A. Abu-Daibes, Ala'a F. Eftaiha, Khaleel I. Assaf, Rania Abu-Zaid, Adnan S. Abu-Surrah, Carsten Troll, and Bernhard Rieger. “In situ Activation of Green sorbents for CO<sub>2</sub> Capturing upon End Group Backbiting”. *Phys. Chem. Chem. Phys.*, **2022**,24, 12293-12299.
2. Verónica Bastos, Párastu Oskoei, Elina Andresen, **Maysoon I. Saleh**, Bastian Rühle, Ute Resch-Genger, Helena Oliveira. “Stability, Dissolution, and Cytotoxicity of NaYF<sub>4</sub>-Upconversion Nanoparticles with Different Coatings”. *Sci Rep* 12, 3770 (**2022**). doi: <https://doi.org/10.1038/s41598-022-07630-5>
3. **Maysoon I. Saleh**, Shu Wang, Bastian Rühle, Jörg Radnik and Ute Resch-Genger. “Assessing the protective effects of different surface coatings on NaYF<sub>4</sub>:Yb<sup>3+</sup>, Er<sup>3+</sup> upconverting nanoparticles in buffer and DMEM”. *Sci Rep* 10, 19318 (**2020**). <https://doi.org/10.1038/s41598-020-76116-z>
4. **Maysoon I. Saleh**, Ihor Panas, Florian Frenzel, Christian Würth, Bastian Rühle, Yuri L. Slominskii, Alexander Demchenko, and Ute Resch-Genger. "Sensitization of upconverting nanoparticles with a NIRemissive cyanine dye using a micellar encapsulation approach." **2019** *Methods Appl. Fluoresc.* 7 014003

5. Cynthia Kembuan, **Maysoon Saleh**, Bastian Rühle, Ute Resch-Genger and Christina Graf. “Coating of upconversion nanoparticles with silica nanoshells of 5 – 250 nm thickness”. *Beilstein J. Nanotechnol.* **2019**, 10, 2410–2421. doi:10.3762/bjnano.10.231
  6. Amjad H. El-Sheikh, Jamal A. Sweileh, **Maysoon I. Saleh**. “Partially pyrolyzed olive pomace sorbent of high permeability for preconcentration of metals from environmental waters” *Journal of Hazardous Materials*, 169: 58–64. **2009**
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## Scientific Conference Presentations and Posters

1. V. Bastos, R. Afonso, J. Nogueira, D. Brandão, S. F. Soares, P. Oskoei, **M. Saleh**, E. Andresen, B. Rühle, U. Resch-Genger, A. L. Daniel-da-Silva, H. Oliveira, “*UCNPs nanocapsules for doxorubicin targeting delivery in melanoma cell lines*”. COST Action 17104 (STRATAGEM) WG2 Meeting and International Online Symposium on “Synthesis and nanodelivery strategies for new therapeutic tools against Multidrug Resistant Tumours” **Oral presentation**, online meeting, 2020
2. S. Wang, **M. Saleh**, C. Abad Andrade, E. Andresen, B. Rühle, S. Recknagel and U. Resch-Genger. “*Dissolution and Monitoring of NaYF<sub>4</sub>: Yb<sup>3+</sup>, Er<sup>3+</sup> Upconverting Nanoparticles in Aqueous Media*”. **Poster**, Anakon 25<sup>th</sup> – 28<sup>th</sup> March 2019, Münster
3. **M. Saleh**, C. Kembuan, F. Frenzel, B. Rühle, C. Würth, C. Graf and U. Resch-Genger. “*Synthesis and systematic characterization of core-muti-shell NaYF<sub>4</sub>:Er<sup>3+</sup>, Yb<sup>3+</sup>@SiO<sub>2</sub>@Au nanoparticles for the enhancement of fluorescence emission*”. **Poster**, BAM-PTB workshop on reference materials. 14<sup>th</sup>-15<sup>th</sup> May 2018, Berlin
4. **M. Saleh**, C. Kembuan, B. Rühle, C. Graf and U. Resch-Genger. “*Gold-shell coated NaYF<sub>4</sub>:Er<sup>3+</sup>, Yb<sup>3+</sup> nanoparticles for the enhancement of fluorescence emission*”. **Poster**, 2nd Conference and Spring School on Properties, Design and Applications of Upconversion Nanomaterials, 2<sup>nd</sup> – 6<sup>th</sup> April 2018, Valencia, Spain
5. **M. Saleh**, Y. Shen, C. Kembuan, A. Beqiraj, F. Frenzel, U. Resch-Genger, C. Graf. “*Optimization of the Coating Procedure of Upconversion Nanoparticles with Silica*” **Poster**. 1st Conference and Spring School on Properties, Design and Applications of Upconverting Nanomaterials, 23<sup>rd</sup>-27<sup>th</sup> May 2016, Wroclaw, Poland
6. C. Kembuan, **M. Saleh**, U. Resch-Genger, C. Graf. “Structured metal nanoshell particles for controlled enhancement of photon up-conversion and Cu detection” **Poster**. 1st Conference and Spring School on Properties, Design and Applications of Upconverting Nanomaterials, 23<sup>rd</sup>-27<sup>th</sup> May 2016, Wroclaw, Poland
7. **M. Saleh**. “Structured metal nanoshell particles for controlled enhancement of photon upconversion and Cu detection” **Oral presentation**. The 29th Day of Chemistry (TDC), 18th June 2015. Freie Universität Berlin, Berlin, Germany
8. C. Kembuan, **M. Saleh**, U. Resch-Genger, C. Graf. “*Structured metal nanoshell particles for controlled enhancement of photon up-conversion and Cu detection*”, **Poster**. IACIS 2015 and 47<sup>th</sup> Conference of the German Colloid Society, May 2015, Mainz, Germany.
9. **Maysoon Saleh** and Murad Aldamen. “*A New Mixed Multi-Metallic Calcium Cobalt-Phosphotungstate with C-like Polyanion: Na<sub>5</sub>Ca<sub>6</sub>[Co<sub>6</sub>P<sub>3</sub>W<sub>24</sub>O<sub>94</sub>(H<sub>2</sub>O)<sub>2</sub>]*”, **Poster**, International Conference on Sciences, 20<sup>th</sup>-22<sup>th</sup> November 2012, Al al-Bayt University, Mafraq, Jordan

10. **Maysoon I. Saleh**, Amjad H. El-Sheikh and Jamal A. Sweileh. “*Preconcentration of metal ions from aqueous medium using partially pyrolyzed olive waste sorbents*” **Poster**. 8<sup>th</sup> Jordanian International Conference in Chemistry, 21 April 2008, Al Al-bayt University, Mafraq, Jordan

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## Languages

- **Arabic:** Native language (mother tongue)
  - **English:** Full professional proficiency (C1), TOEFL iBT: 94/120  
Reading: 24/30, Listening: 19/30, Writing: 23/30, Speaking: 28/30 (test date: 13<sup>th</sup>. Nov. 2021)
  - **German:** Intermediate level (B1)
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## Scholarships

- Research Fellowship, **Dahlem Research School (DRS)** *Jul. 2016 – Mar. 2017*
  - Research Fellowship, **Erasmus mundus** (Dunia Beam Project) scholarship *Oct. 2013 – Jul. 2016*
  - **Teacher Education Institute, TEI**. University of the Middle East Project (UME), 2011  
A four-week fully funded workshop entitled with “*Preparing Youth for the Future: Intercultural and Interdisciplinary Approaches for Student Engagement*”
  - M.Sc. Fellowship, **The Hashemite University**, Zarqa, Jordan *Oct. 2005 – Jun. 2007*
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## References:

**1. Dr. Ute Resch-Genger**, Head of Biophotonics division  
German Federal Institute for Materials Research and Testing, Germany  
Email: [ute.resch@bam.de](mailto:ute.resch@bam.de)  
Phone number: +49 30 8104-1134

**2. Dr. Bastian Rühle**, Project Group Leader  
German Federal Institute for Materials Research and Testing, Germany  
Email: [bastian.ruehle@bam.de](mailto:bastian.ruehle@bam.de)  
Phone number: +49 30 8104-5571

**3. Dr. Amjad El-Sheikh**, Professor of Environmental Analytical Chemistry  
The Hashemite University, Jordan  
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Phone number: +9662 79 562 7128

**Maysoon Saleh**

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