

**Dr. Ali Al-Sawalmih**

Director,  
Marine Science Station Institute,  
The University of Jordan, Aqaba 77110, Jordan  
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**Personal Information:**

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Date & place of Birth: 22.11.1975, Irjan/Jordan  
Languages: Arabic, English, and German.  
Marital status: Married (2 daughters)

**Academic career:**

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- 08.2018-now Director  
Marine Science Station (MSS)/the University of Jordan & Yarmouk University, Aqaba, **Jordan**
- 08.2012-now Researcher  
Marine Science Station (MSS)/the University of Jordan & Yarmouk University, Aqaba, **Jordan**
- 01.2007-07.2012 Scientist  
Max-Planck-Institute of Colloids and Interfaces, Potsdam, **Germany**

**Education:**

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- 2004-2007 Doctor of Science (PhD) *Marine Materials*  
RWTH Aachen University (& Max-Planck-Institute MPIE, Prof. Dierk Raabe)  
Aachen, **Germany**
- 2001-2004 Master of Science (MSc) *Solid State Physics*  
University of Stuttgart (& Max-Planck-Institute MPI-FKF, Prof. Bernard Keimer)  
Stuttgart, **Germany**
- 1993-1997 Bachelor's in physics (BSc), *Solid State Physics*  
Dept. of Physics, Faculty of Science, University of Mosul  
Mosul, **Iraq**

**Publications:**

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1. Practices of Coastal Zone Management of the Jordanian Gulf of Aqaba by Mapping Spatial Convergence of Seafront Human Activities and their Potential Impact on the Marine Environment  
Author(s): Alrowwad A., Al Sawalmih A.\*, Manasrah R., Rasheed M., Kteifan M., Soleiman A., Arabeyyat Z., Al-Saad A., Barnett S.  
Source: Fresenius Environmental Bulletin, Volume: 29 Issue: 4A/2020 Pages: 3240-3253, Published: APR 2020
2. Science, Diplomacy, and the Red Sea's Unique Coral Reef: It's Time for Action  
Author(s): Kleinhaus K., Al-Sawalmih A., Barshis D. J., Genin A., Grace L. N., Hoegh-Guldberg O., Loya Y., Meibom A., Osman E. O., Ruch J.-D., Shaked Y., Voolstra C. R., Zvuloni A., Fine M.  
Source: Frontiers in Marine Science, Volume: 07 Issue: 02/2020 Published: FEB 2020
3. Physical and Chemical properties of seawater during 2013-2015 in the 400 m water column in the northern Gulf of Aqaba, Red Sea  
Author(s): Manasrah R., Alsaad L., Trabeen K., Rasheed M., Al-Absi E., Kellie Dixon L., Al-Sawalmih A.\*

- Source: Environmental Monitoring and Assessment, Volume: 192 Issue: 3 Pages: 188–192, Published: MAR 2020
4. Structural, Electronic and Optical Characterization of ZnO Thin Film-Seeded Platforms for ZnO Nanostructures: Sol–Gel Method Versus Ab Initio Calculations  
Author(s): Al-Bataineh Q. Alsaad A. M., A., Ahmad A., Al-Sawalmih A.  
Source: Journal of Electronic Materials, Volume: 48 Issue: 8 Pages: 5028–5038, Published: JUN 2019
  5. Comparison of hydrological and physical properties between the manmade Saraya Lagoon and the northern Gulf of Aqaba  
Author(s): Manasrah, R. and Nazzal, F. and Al-Sawalmih, A.  
Source: Fresenius Environmental Bulletin, Volume: 28 Issue: 7/2019 Pages: 5539-5548, Published: JUL **2019**
  6. Elemental Analysis of the coral *Stylophora pistillata* Incubated Along the Jordanian Coast of the Gulf of Aqaba  
Author(s): Al-Sawalmih, A., Al-Horani F., Al-Rousan S.  
Source: Fresenius Environmental Bulletin, Volume: 26 Issue: 4/2017 Pages: 3030-3037, Published: APR **2017**
  7. Heterogeneous Microstructure and Distribution of Trace Elements in Coral *Stylophora pistillata* Nursed in the Phosphate Loading Berth Site in the Gulf of Aqaba  
Author(s): Al-Sawalmih, A.; Megdadi, J.  
Source: Natural Science Volume: 8 Issue: 12 Pages: 541-552 Published: DEC **2016 NA**
  8. Calcium Composition and Microstructure of Coral *Stylophora pistillata* under Phosphate Pollution Stress in the Gulf of Aqaba  
Author(s): Al-Sawalmih, A.  
Source: Natural Science Volume: 8 Issue: 3 Pages: 89-95 Published: MAR **2016 NA**
  9. Layered growth of crayfish gastrolith: About the stability of amorphous calcium carbonate and role of additives  
Author(s): Habraken, Wouter J. E. M.; Masic, Admir; Bertinetti, Luca; et al.  
Source: Journal of Structural Biology Volume: 189 Issue: 1 Pages: 28-36 Published: JAN **2015**
  10. Enamel-like apatite crown covering amorphous mineral in a crayfish mandible  
Author(s): Bentov, Shmuel; Zaslansky, Paul; Al-Sawalmih, Ali; et al.  
Source: Nature Communications Volume: 3 Published: MAY **2012**
  11. Mapping Lattice Spacing and Composition in Biological Materials by Means of Microbeam X-Ray Diffraction  
Author(s): Paris, Oskar; Aichmayer, Barbara; Al-Sawalmih, Ali; et al.  
Source: Advanced Engineering Materials Volume: 13 Issue: 8 Pages: 784-792 Published: **2010**
  12. On the Stability of Amorphous Minerals in Lobster Cuticle  
Author(s): Al-Sawalmih, Ali; Li, Chenghao; Siegel, Stefan; et al.  
Source: Advanced Materials Volume: 21 Issue: 40 Pages: 4011-+ Published: OCT 26 **2009**
  13. Microtexture and Chitin/Calcite Orientation Relationship in the Mineralized Exoskeleton of the American Lobster  
Author(s): Al-Sawalmih, Ali; Li, Chenghao; Siegel, Stefan; et al.  
Source: Advanced Functional Materials Volume: 18 Issue: 20 Pages: 3307-3314 Published: OCT 23 **2008**
  14. Preferred crystallographic texture of alpha-chitin as a microscopic and macroscopic design principle of the exoskeleton of the lobster *Homarus americanus*  
Author(s): Raabe, D.; Al-Sawalmih, A.; Yi, S. B.; et al.

- Source: Acta Biomaterialia Volume: 3 Issue: 6 Pages: 882-895 Published: NOV **2007**
15. The small-angle and wide-angle X-ray scattering set-up at beamline BL9 of DELTA  
Author(s): Krywka, Christina; Sternemann, Christian; Paulus, Michael; et al.  
Source: Journal of Synchrotron Radiation Volume: 14 Pages: 244-251 Published: MAY **2007**
16. The small-angle and wide-angle X-ray scattering set-up at beamline BL9 of DELTA  
Author(s): Krywka, Christina; Sternemann, Christian; Paulus, Michael; et al.  
Source: Journal of Synchrotron Radiation Volume: 14 Pages: 391 Published: JUL **2007**
17. Microstructure and crystallographic texture of the chitin-protein network in the biological composite material of the exoskeleton of the lobster *Homarus americanus*  
Author(s): Raabe, D; Romano, P; Sachs, C; et al.  
Source: Materials Science and Engineering a-Structural Materials Properties Microstructure and Processing Volume: 421 Issue: 1-2 Pages: 143-153 Published: APR 15 **2006**
18. Discovery of a honeycomb structure in the twisted plywood patterns of fibrous biological nanocomposite tissue  
Author(s): Raabe, D; Romano, P; Sachs, C; et al.  
Source: Journal of Crystal Growth Volume: 283 Issue: 1-2 Pages: 1-7 Published: SEP 15 **2005**
19. Mesostructure of the exoskeleton of the lobster *Homarus americanus*  
Author(s): Raabe, D; Romano, P; Al-Sawalmih, A; et al.  
Source: Structure and Mechanical Behavior of Biological Materials Volume: 874 Pages: 155-160 Published: **2005**
20. Structure and crystallographic texture of arthropod bio-composites  
Author(s): Raabe, D; Al-Sawalmih, A; Romano, P; et al.  
Source: ICOTOM 14: Textures of Materials, Pts 1 and 2 Volume: 495-497 Pages: 1665-1674 Published: **2005**

#### Conferences & Symposiums:

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- 3rd Max Planck Symposium for Alumni and Early Career Researchers "Advances in Digitalization", 20-23.11.2018, Berlin, Germany
- 4<sup>th</sup> Bio-inspired Materials Conference, 19-22.03.2018, Potsdam, Germany
- SESAME Synchrotron Users' Meeting 2017, Nov. 18-19, 2017, Amman-Jordan
- World Science Forum, 20-21.11.2017, Dead Sea, Jordan
- 2nd Max Planck Symposium for Alumni and Early Career Researchers "Sustainability and Social Engagement", 31.08-03.09.2017, Berlin, Germany
- TAIEX Workshop on GEANT H2020 and European Synchrotron Sources, 12-13.08.2017
- The Eleventh International Training Workshop on Integrated Maritime Strategy and Marine Spatial Planning in the Mediterranean & the Black Sea, 20-27.09.2016, Dalyan, Turkey
- 1st Max Planck Symposium for Alumni and Early Career Researchers, 22.08-24.08.2016, Berlin, Germany
- 3<sup>rd</sup> Bio-inspired Materials Conference, 22-26.02.2016, Potsdam, Germany
- MOTE Laboratory Meeting on Ocean Acidification, 26.08-02.09.2015, Key West (FL), USA
- SESAME Synchrotron Users' Meeting 2014, 26-27.11.2014, Amman-Jordan
- Aqaba International Conference on Marine and Coastal Environment, Sept. 27-29, 2014, Jordan

- German-Arab Environment Forum, Euro-Mediterranean Association for Cooperation and Development EMA e.V., September 9<sup>th</sup>-11<sup>th</sup>, **2013**, Amman, Jordan
- The 1<sup>st</sup> Arabic Conference on Disaster Risk Reduction, March 19-21, **2013**, Aqaba-Jordan
- SESAME Synchrotron Users' Meeting 2012, Nov. 07-09, **2012**, Amman-Jordan
- 1<sup>st</sup> Bio-inspired Materials Conference, 20-23.03. **2012**, Potsdam, Germany
- BER II/BESSY II Users' Meeting, Nov. 30-Dec 02, **2011**, Berlin, Germany
- Gordon Conference on Biomineralization, Aug. 15-20, **2010**, New London (NH), USA
- SESAME-JSPS-Sabancı Synchrotron Radiation Workshop, March 1-5, **2010**, Antalya-Turkey
- SESAME Synchrotron Users' Meeting 2009, Nov. 19-21, **2009**, Petra-Jordan
- EUROMAT-2009 (European Congress and Exhibition on Advanced Materials and Processes), Sept. 07-10, **2009**, Glasgow-UK
- Max-Planck Summer School on Amorphous Solids in Physics and Biology, June 01-03, **2009**, Germany
- SESAME Synchrotron Users' Meeting 2008, Nov. 19-21, **2008**, Cairo-Egypt
- MSE 2008 - Materials Science and Engineering, Sept. 01-04, **2008**, Nurmberg-Germany
- Gordon Conference on Biomineralization, Aug. **2008**, New London (NH), USA
- ICOTOM-2008, June **2008**, Pittsburgh PA, USA.
- 1st Workshop on X-Ray Micro and Nanoprobes, July **2007**, Erice-Italy
- Minerva School on Biological and Bioinspired Materials, May **2007**, Berlin, Germany
- International Symposium on Scanning Microbeam Small- and Wide-Angle Scattering of Hierarchically Structured Materials, Dec. 6, **2006**, Berlin, Germany

### References:

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- Prof. Dr. Peter Fratzl  
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