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- **April 2012** - present: Post doctorate at the Institute of Electrochemistry - University of Ulm.
- **February 2011 - March 2012:** Post doctorate at Jülich Research Center GmbH-Institute of Complex systems 7.
- **May 2011:** Dissertation in Natural Sciences - Experimental Physics: University of Düsseldorf Thesis title: "*Dynamic of Steps on Au(11n) in Electrochemical Environment*".
- **March 2007 - February 2008:** Scientific co-worker at the Institute of Material Science and Material Technology- Technical University Freiberg.
- **October 2004 - February 2007:** Master degree in Physics: University of Stuttgart/ Max Planck Institute for Metals Research Thesis title: "*Physical and structural properties of oxide-based TiO₂ thin films deposited from aqueous solution*".

Publications

1. Ludwig A. Kibler and **Mohammad Al-Shakran** "*Adsorption of Formate on Au(111) in Acid Solution: Relevance for Electro-Oxidation of Formic Acid*". The Journal of Physical Chemistry C. **2016**. DOI: 10.1021/acs.jpcc.6b02044
2. **Mohammad Al-Shakran**, Ludwig A. Kibler, Timo Jacob, Harald Ibach, Guillermo L. Beltramo, Margret Giesen. "*Repulsive Interactions Induced by Specific Adsorption: Anomalous Step Diffusivity and Inadequacy of Nearest-Neighbor Ising Model : (Part I Experimental)*". Journal of Surface Science. DOI: [10.1016/j.susc.2016.03.021](https://doi.org/10.1016/j.susc.2016.03.021)
3. Harald Ibach, Margret Giesen, **Mohammad Al-Shakran**, Ludwig A. Kibler, Timo Jacob "*Repulsive Interactions Induced by Specific Adsorption: Anomalous Step Diffusivity and Inadequacy of Nearest-Neighbor Ising Model: (Part II Theory)*". Journal of Surface Science. DOI: [10.1016/j.susc.2016.03.022](https://doi.org/10.1016/j.susc.2016.03.022)
4. **M. Al-Shakran**, L.A. Kibler and T. Jacob "*Homoepitaxial electrodeposition on reconstructed and unreconstructed Au(100): An in-situ STM study*": Journal of Surface Science , <http://dx.doi.org/10.1016/j.susc.2014.08.001>, (**2014**).
5. **Al-Shakran, M.** ; Kibler, L. A. ; Jacob, T. ; Beltramo, G. ; Giesen, M. "*Step Dipole Moment and Step Line Tension on Au(100) in aqueous KBr electrolyte*". *Electrochimica acta* 180, 427–434 (**2015**).
6. **M. Al-Shakran**, G. Beltramo and M. Giesen "*Kink energy and kink dipole moments on vicinal Au(100) in Halide electrolytes*": Physical Chemistry Chemical Physics Journal, 16, 12143-12149 (**2014**) .
7. **M. Al-Shakran**, G. Beltramo, M. Giesen and H. Ibach: "*Electrical and structural properties of stepped, partially reconstructed Au(11n) surfaces in HClO₄ and H₂SO₄ electrolytes*". Journal of Surface Science, 605, 232-239 (**2011**).
8. H. J. Seifert , Z. Pan , **M. H. Al-Shakran** , O. Fabrichnaya , R. H. Baney , J. S. Tulenko "*Phase reactions of ceria in LPS SiC*". ECS Meetings - Oxidation of Fuel Cell & Power Generation Materials-Oct 14 **2008** (Honolulu USA). Abstract MA2008-02 1743.