

Mahtab Taheri

Birth date: 16th Feb 1992

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Education

- **Master of Science**, Materials Science & Engineering, University of Tehran (GPA: 3.47/4.00)

2014-2017

Thesis Title: Investigation on electrical and optical properties of nanostructured zinc oxide thin film synthesized via sol-gel electrophoretic method for photocatalytic applications

- Extensive experimental study on different ZnO nanostructures influenced by various types of additives formed during sol-gel electrophoretic deposition as a novel method and their potential for photocatalytic application.
- Characterized ZnO synthesized films extensively with different techniques such as Field emission electron microscopy (FESEM), Brunauer–Emmett–Teller (BET) method, X-ray diffractometer.
- Supervised an undergraduate student.

- **Bachelor's Degree**, Materials Science & Engineering, Isfahan University of Technology (GPA: 3.08/4.00)

2010-2014

Thesis Title: The effect of lubricant emulsion percentage and type of lubricant on surface smoothness in the milling process of 2210 steel

Journal Publications

1. **M. Taheri**, H. Abdizadeh, M.R. Golobostanfard, "Formation of urchin-like ZnO nanostructures by sol-gel electrophoretic deposition for photocatalytic application", *Journal of Alloys and Compounds* 725 (2017) 291-301.

<https://www.sciencedirect.com/science/article/pii/S0925838817325495>

2. **M. Taheri**, H. Abdizadeh, M.R. Golobostanfard, "Hierarchical ZnO Nanoflowers and Urchin-Like Shapes Synthesized via Sol-Gel Electrophoretic Deposition with Enhanced Photocatalytic Performance", *Materials Chemistry and Physics* 220 (2018) 118-127.

<https://www.sciencedirect.com/science/article/pii/S0254058418307132>

3. M. Ghorbani, H. Abdizadeh, **M. Taheri**, M.R. Golobostanfard, "Enhanced Photoelectrochemical Water Splitting in Hierarchical Porous ZnO/Reduced Graphene Oxide

Nanocomposite Synthesized by Sol-Gel Method", *International Journal of Hydrogen Energy* 43 (2018) 7754-7763.

<https://www.sciencedirect.com/science/article/pii/S0360319918308115>

4. A.M. Hallajzadeh, H. Abdizadeh, **M. Taheri**, M.R. Golobostanfard, " Growth of ZnO films in sol-gel electrophoretic deposition by different solvents", *AIP Conference Proceedings* 1920 (2018).

<https://aip.scitation.org/doi/abs/10.1063/1.5018966>

Academic Experiences

- **Research Assistant**, School of Materials Science & Engineering, University of Tehran, 2014-2017 under supervision of Professor H. Abdizadeh.
 - Performed first of its kind experimental study on sol-gel electrophoretic deposition of ZnO films.
 - As a research assistant, I have been systematically learned the principle of team working (to communicate, prioritize, be focused, friendly, fast and flexible).
- **Research Leader**, University of Tehran, leading and supervising a bachelor degree student working on synthesizing of doped-zinc oxide films by sol-gel electrophoretic method.

Skills

- **Supervising students**
- **Lecturing experiences**
- **Characterization methods:** Field Emission Scanning Electron Microscopy (FESEM), Brunauer–Emmett–Teller (BET) method, X-ray diffraction (XRD)
- **Laboratory Skills:** Experience in working with laboratory devices such as: dip-coat and spin-coat, electrophoretic deposition. Experimental design, synthesis of ZnO nanopowders and films, synthesis of ZnO/Reduced graphene oxide nanocomposite
- **Computer software:** X'pert (phase analyzer software), Microsoft Office (Excel, Word, Powerpoint), Photoshop
- **Internship:** Isfahan Mobarakeh Steel Company, Internship, summer 2014 (QC/QA department consists of four units: raw materials, castings, cold rolling and hot rolling)
- **English Proficiency:** IELTS Score: 7

Research Interests

- Nanomaterials, Nanoscience, Semiconductors
- Biomaterials
- Additive manufacturing
- Laser technology
- Smart materials including: sensors, piezoelectric, memories
- Electrochemistry: fuel cell, battery, supercapacitor
- Water splitting, solar cells, photocatalysis, H₂ production.

Job Experience

- **NECO Industry Management** (QC/QA Expert)
July 2017 – Jan 219
 - Allocating and assigning inspector in order to control manufacturing process
 - Evaluating the IVR (Inspection Visit Report).
 - Coordination and corresponding with all parties to expedite all issues and following planned items.

References will be provided upon request.