Curriculum Vitae

Ali Sajedi-Moghaddam (Ph.D.)

Born: 23 Sep. 1986
E-Mail address: amsajedi80@gmail.com
Websites: Google Scholar, Researchgate

Education:

2013- 2018: **Ph.D.,** Condensed Matter Physics, Tarbiat Modares University, Tehran, Iran.

Dissertation Title: Synthesis and characterization of nanocomposites based on post-graphene two-dimensional nanostructures and polyaniline for supercapacitor application

2008-2011: **M.Sc.,** Solid State Physics, Tabriz University, Tabriz, Iran.

Thesis Title: Studying the effect of annealing and substrate temperature on structural, optical and electrical properties of SnO_2 thin films prepared by electron beam evaporated technique

2004-2008: **B.Sc.,** Solid State Physics and Electronics, Tabriz University, Tabriz, Iran.

Publications:

1- Exfoliated Transition Metal Dichalcogenide (MX_2; M = Mo, W; X = S, Se, Te) Nanosheets and Their Composites with Polyaniline Nanofibers for Electrochemical Capacitors, **Applied Materials Today,** 2019, **16**, 280–289 **(IF: 8.100),**

2- **Ali Sajedi-Moghaddam,** Esmaiel Saievar-Iranizad, and Martin Pumera. "Two-dimensional transition metal dichalcogenide/conducting polymer composites: synthesis and applications". **Nanoscale,** 2017**, 9,** 8052-8065**. (IF: 7.367),**

3- **Ali Sajedi-Moghaddam,** Carmen C. Mayorga-Martinez, Zdenek Sofer, Esmaiel Saievar-Iranizad and Martin Pumera. "Black phosphorus nanoflakes/polyaniline hybrid material for high-performance pseudocapacitors". **The Journal of Physical Chemistry C**, 2017, **37**, 20532-20538. **(IF: 4.536),**

4-Imrich Gablech, Jan Pekárek, Jaroslav Klempa, Vojtěch Svatoš, **Ali Sajedi-Moghaddam**, Pavel Neužil, Martin Pumera, "Monoelemental 2D materials-based field effect transistors for sensing and biosensing: Phosphorene, antimonene, arsenene, silicene, and germanene go beyond graphene" **Trends in Analytical Chemistry**, 2018, **105**, 251-262**. (IF: 8.442),**

5- **Ali Sajedi-Moghaddam** and Esmaiel Saievar-Iranizad. "High-yield exfoliation of tungsten disulphide nanosheets by rational mixing of low-boiling-point solvents". **Materials Research Express**, 2018, **5**, 015045. **(IF: 1.068),**

6- Elham Rahmanian, **Ali Sajedi-Moghaddam,** Amir Bayat, Esmaiel Saievar-Iranizad, Rasoul Malekfar, "Optical and Structural Characterization of Molybdenum Disulphide Nanoflakes Prepared by Solvent-based Exfoliation". **Nanoscale**. 2015, **2**, 63,

7- Impact of Elemental Doping on the Energy Storage Performance of Layered TiS_2, (**Under Preparation**).

8- 3D Printing Technology for Supercapacitor Applications: Recent Advances and Prospects, (**Under Preparation**).

Research Interests:

- Nanofabrication,
- 2D Materials,
- Energy Storage,
- Thin Film Deposition,
- 3D Printing.

Professional Experience:

2018: **Researcher**, Center for Advanced Functional Nanorobots, University of Chemistry and Technology, Prague.

2016-2017: **Research Assistant**, School of Physical and Mathematical Sciences, Nanyang Technological University (NTU), Singapore.

Characterization Skills:

Scanning electron microscopy (SEM), Raman Spectroscopy, Electrochemical characterizations such as CV, GCD, and EIS, X-ray Photoelectron Spectroscopy (XPS), X-ray diffraction (XRD), Photoluminescence spectroscopy, UV-Vis & FTIR Spectroscopy.

Honors and Awards:

2013: Ranked **27** among 4100 applicants in PhD national entrance exam

2016: Won two scholarships from Ministry of Science, Research & Technology of Iran & Iran's National Elites Foundation

Workshops:

2013: Advanced School on Graphene and its Optoelectronic Devices, Tabriz University, Tabriz, Iran.

2015: 2nd PAM Spring School on Emergent Quantum Phenomena in Graphene, Sharif University of Technology, Tehran, Iran.

2015: Annual RIAPA International Meeting on Low Dimensional Systems, Tabriz University, Tabriz, Iran.

2016: Flatland 2D materials beyond Graphene, Institute for Research in Fundamental Sciences, Tehran, Iran.

2018: Sensing with graphene and 2-dimensional materials, November 5 – 6, 2018, Aachen, Germany.

Computer Skills:

Applications: Microsoft Office Suite, OriginPro, Inkscape, VESTA, Blender

Programming Languages: Matlab

Operating Systems: UNIX, Windows 8, Windows 10

DFT Codes: WIEN2k

Teaching Experience:

Fundamental physics (Electricity and Magnetism) (2014-2016)

Azad University, North Tehran Branch, Tehran, Iran.

Fundamental physics (Mechanics) (2014-2016):

Azad University, North Tehran Branch, Tehran, Iran.

Presented Seminars:

1- Solid-State Gas Sensors, M.Sc. Seminar, 2011. **Grade: 19.5/20**

2- Synthesis and Tuning the Electronic and Catalytic Properties of 2D Transition Metal Dichalcogenides through Intercalation, Ph.D. Seminar, 2015. **Grade: 20/20**

3- 2D Van der Waals Heterostructures: Synthesis and Characterization Approaches. Ph.D. Seminar, 2015. **Grade: 20/20**

4- Biomedical Applications of Post-graphene 2D Nanomaterials, Ph.D. Seminar, 2016. **Grade: 20/20**