Personal Details:

First name: *Fatemeh (Mrs.)*

Surname: *Shariatmadar Tehrani*

Tel: *0098-(0)23-31533290*
Email: *f_tehrani@semnan.ac.ir*
Work Address: Faculty of physics, Semnan University, P.O. Box 35195-363, Semnan, Iran
Position*: Assistance professor of Physics*
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Academic Qualification:

2009-2013 Ph.D.

Solid state Physics, Low Dimensional Material Research Center (LDMRC), University of Malaya (UM), Kuala Lumpur, Malaysia

Title of PhD thesis:

Hot-wire chemical vapour deposition of silicon carbide thin films from pure silane and methane gases

Supervisor: *Prof. Saadah Abdul Rahman*
University of Malaya, Malaysia

2004-2006 M.Sc.

Solid state Physics
Shahrood University of Technology, Shahrood, Iran.

Average Mark: 17.82 out of 20.

Project:. *Electrical transport properties of dilute nitride semiconductors (GaAsN)*

Supervisor: *Dr Hossein Eshghi.*
Shahrood University of Technology, Shahrood, Iran.

1999-2003 B.Sc.

Solid state Physics.
Shahrood University of Technology, Shahrood, Iran.

Average Mark: *17.43 out of 20.*

Work Experience:

- Teaching physics in **Shahrood University of technology, Iran**
- Teaching Physics and mathematics in **Fanni Hefehee University** in Shahrood, Iran
- Teaching various courses(Science, Physics, art,..) in **High school** in Iran and In Malaysia (Iranian school)
- Research Assistant in UM (under Prof Saadah Abd Rahman), Kuala Lumpur, Malaysia
- Assistant professor in Faculty of Physics, Semnan University, Iran

Skills and Training

- Computer skills: able to work with some software: **Sigma plot**(to drown the plot of results in experiments and fitting), **MathCAD, Origin** (to analysis the data from experiments),writing program in: **Maple8, Pascal, C**,...
- Data analysis using **X'pert highscore, FULLPROF, Digimizer,..**
- Attendance in 2 **International physics conference** in Iran 2003 and 2006
- Attendance in **Optic and laser education** in Zanjan University and pass some courses and lab work there.
- Contribution in **15th International School On Condensed Matter Physics (Varna 2008).**

Research interests:

- Semiconductor thin films (Si-based materials, SiC)
- Chemical vapor deposition

- Optical and structural properties
- Nanostructures
- Metal oxide nanostructures
- Metal-organic frameworks
- Gas sensors
- Photocatalytic applications

Publications

1. Sheikhi, S., M. Aliannezhadi, and F.S. Tehrani, Effect of precursor material, pH, and aging on ZnO nanoparticles synthesized by one-step sol–gel method for photodynamic and photocatalytic applications. The European Physical Journal Plus, 2022. 137(1): p. 60.

2. Abbaspoor, M., M. Aliannezhadi, and F.S. Tehrani, Effect of solution pH on as-synthesized and calcined WO3 nanoparticles synthesized using sol-gel method. Optical Materials, 2021. 121: p. 111552.

3. Tehrani, F.S., E. Rasouli, and M. Aliannezhadi, Novel photoluminescent In 2 O 3/a-SiC core/shell nanostructure synthesized by HW-assisted PECVD method. The European Physical Journal Plus, 2021. 136(3): p. 1-14.

4. Jamali, M. and F.S. Tehrani, Thermally stable WO3 nanostructure synthesized by hydrothermal method without using surfactant. Materials Science and Engineering: B, 2021. 270: p. 115221.

5. Tehrani, F.S., H. Ahmadian, and M. Aliannezhadi, High specific surface area micro-mesoporous WO 3 nanostructures synthesized with facile hydrothermal method. The European Physical Journal Plus, 2021. 136(1): p. 1-11.

6. Ahmadian, H.R., F. Shariatmadar Tehrani, and M. Aliannezhadi, Effect of hydrothermal temperature on the physical and chemical properties of tungsten oxide nanostructures. Applied Chemistry, 2020. 15(54): p. 43-54.

7. Tehrani, F.S., H. Ahmadian, and M. Aliannezhadi, Hydrothermal synthesis and characterization of WO3 nanostructures: effect of reaction time. Materials Research Express, 2020. 7(1): p. 015911.

8. Jamali, M. and F.S. Tehrani, Effect of synthesis route on the structural and morphological properties of WO3 nanostructures. Materials Science in Semiconductor Processing, 2020. 107: p. 104829.

9. Tehrani, F.S., M. Fakhredin, and M.J. Tafreshi, The optical properties of silicon carbide thin films prepared by HWCVD from pure silane and methane under various total gas partial pressure. Materials Research Express, 2019. 6(8): p. 086469.

10. Ehsani, M, Esmaeili,S, Aghazadeh, M, Kameli, P, Shariatmadar Tehrani, F, Karimzadeh, I, An investigation on the impact of Al doping on the structural and magnetic properties of Fe 3 O 4 nanoparticles. Applied Physics A, 2019. 125(4): p. 1-9.

11. Ahmadian, H., F.S. Tehrani, and M. Aliannezhadi, Hydrothermal synthesis and characterization of WO3 nanostructures: effects of capping agent and pH. Materials Research Express, 2019. 6(10): p. 105024.

12. M. A. Abdul Rahman, W. S. Chiu, C. Y. Haw, R. Badaruddin, F. S. Tehrani, M. Rusop, P. Khiew, S. A. Rahman, Multi-phase structured hydrogenated amorphous silicon carbon nitride thin films grown by plasma enhanced chemical vapour deposition, Journal of Alloys and Compounds 721 (2017) 70-79.

13. Fatemeh Shariatmadar Tehrani , ***Influence of total gas partial pressure on the structural formation of SiC thin films deposited by HWCVD technique,*** J Mater Sci: Mater Electron (2016) 27:11457–11462.

14. Fatemeh Shariatmadar Tehrani , ***Transformation from amorphous to nano-crystalline SiC thin films prepared by HWCVD technique without hydrogen dilution***, Bulletin of Materials Science (2015) 38 (5), 1333-1338

15. Fatemeh Shariatmadar Tehrani, Saadah Abdul Rahman, ***Influence of filament-to-substrate distance on the spectroscopic, structural and optical properties of silicon carbide thin filmsdeposited by HWCVD technique***, Journal of Materials Science: Materials in Electronics (2014) 25:2366–2373.

16. F. Shariatmadar Tehrani, B.T. Goh, M.R. Muhamad, S.A. Rahman, ***Pressure dependent structural and optical properties of silicon carbide thin films deposited by hot wire chemical vapor deposition from pure silane and methane gases***, Journal of Materials Science: Materials in Electronics, 2013. 24(4): p. 1361-1368.

17. F. Shariatmadar Tehrani, M.R. Badaruddin, R.G. Rahbari, M.R. Muhamad, S.A. Rahman, ***Low-pressure synthesis and characterization of multiphase SiC by HWCVD using CH_4/SiH_4***, Vacuum 86 (2012), 1150-1154

18. F. Shariatmadar Tehrani, R. Ritikos, B.T. Goh, M.R. Muhamad, S.A. Rahman, ***Effect of methane flow rate on properties of HWCVD silicon carbide thin films***, Solid State Science and Technology 19 (2011) 26-31

19. F. Shariatmadar Tehrani, M. R. Muhamad and S. A. Rahman, ***Structural and optical properties of high deposition rate silicon carbide prepared by Hot Wire CVD***, The 5th International Conference on Technological Advances of Thin Films & Surface Coatings 11 -14 July 2010, Harbin, China

20. H. Eshghi, F. Shariatmadar Tehrani, ***A quantitative study of nitrogen content influence on the carrier mobility in GaN_xAs_{1-x} ($0.008<x<0.022$)***, Journal Of Optoelectronics and Advanced Material (2009) 11: 1467 - 1470

Awards

- Award from **Chancellor** of Shahrood University of Technology for the **best grade** in University among the students in Bsc and Msc.

- **Best Poster Prize** From the Organizing Committee of ISCMP award. (Poster title: A Quantitative study of nitrogen concentration on dislocation density in dilute nitride semiconductor GaN_XAs_{1-X} ($0.008<x<0.022$)).