

Academic Curriculum Vitae

Personal Information:

Full Name: Dr. Nasih Hma Salah

Academic Title: Assistant Professor

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Education:

Type of Diploma	University	College	Department	Graduation Year	Country
B.Sc.	Kurdistan	Science	Physics	1999	Iran
M.Sc.	Salahaddin	Science	Physics	2005	Iraq
PhD	Plymouth	Science	Physics	2015	UK

Employment:

ACADEMIC EMPLOYMENT

1999-2002, research assistance at Physics Department, College of Science, Salahaddin University, Erbil, IRAQ.

2005-2010, University lecturer, Physics Department, College of Science, Salahaddin University, Erbil, IRAQ.

December 2015 up until now, University lecturer at Physics Department, College of Science, Salahaddin University, Erbil, IRAQ.

Teaching Experience:

Research Methodology: 4th Class of General, Medical and Communication Physics

Thermodynamics: 2nd Class of General, Medical and Communication Physics

Electricity and Magnetism: 1st Class of all branches of physics

Electricity and Magnetism Lab.:1st Class of all branches of physics.

Thermodynamics Lab.:2nd Class of all branches of physics.

Professional Memberships

Teacher Union In Iraqi Kurdistan region

Physics Syndicate in Kurdistan region

Publications

[1] Hma Salah, N., et al., High-Sensitivity Optical Fiber-Based SPR Sensor for Early Cancer Cell Detection Using Cerium Oxide and Tungsten Disulfide. *Microchemical Journal*, 2025. 208: p. 1-14
<https://doi.org/10.1016/j.microc.2024.112312>

- [2] Y. Vasimalla et al., "SMF-based SPR sensors utilizing thallium bromide immobilization for detection of various bacterial cells," *IEEE Open Journal of Nanotechnology*, vol. 5, p. 112312, 2025.
- [3] N. Hma Salah et al., "High-Sensitivity Optical Fiber-Based SPR Sensor for Early Cancer Cell Detection Using Cerium Oxide and Tungsten Disulfide," *Microchemical Journal*, vol. 208, pp. 1-14, 27 November 2024 2025.
- [4] Y. Vasimalla et al., "Bismuth-Immobilized Optical Fiber-Based SPR Nanosensor for Detection of Zinc Nitrate Contamination in Aquaculture Industry," *IEEE Open Journal of Nanotechnology*, vol. 5, pp. 80 - 88, 14 October 2024 2024.
- [5] N. H. Salah et al., "HBL/NaF-based and molybdenum ditelluride-immobilized optical fiber SPR sensor for early detection of melamine residue in food products," *Optics & Laser Technology*, vol. 179, p. 111386, December 2024 2024.
- [6] N. H. Salah et al., "Design and Analysis of High-Performance Optical Fiber-Based Surface Plasmon Resonance Sensor for Early Detection of Colorectal Cancer," *IEEE Sensors Journal*, vol. 24, no. 19, pp. 29919 - 29926, 2024.
- [7] N. H. Salah, A. Pal, H. M. Rasul, A. J. M. Uniyal, and Nanostructures, "Sensitivity enhancement of the surface plasmon resonance sensor based on gallium-doped zinc oxide and silicon for cancer detection: a wavelength interrogation approach," *Micro and Nanostructures*, vol. 186, p. 207736, February 2024 2024.
- [8] N. H. Salah et al., "Gallium Sulfide-Immobilized Optical Fiber-Based SPR Sensor for Detection of Brilliant Blue Food Adulteration," *IEEE Open Journal of Nanotechnology*, vol. 5, pp. 98 - 106, 21 October 2024 2024.
- [9] N. H. Salah, B. Kaur, H. M. Rasul, Y. Vasimalla, and S. J. I. S. J. Kumar, "Optical Fiber-Based SPR Sensor for Chemical and Biological Samples Detection Using 2D Materials," *IEEE Sensors Journal*, vol. 24, no. 16, pp. 25644 - 25651, 15 July 2024 2024.
- [10] H. S. Salah, A. Pal, H. M. Rasul, A. J. M. Uniyal, and Nanostructures, "Sensitivity enhancement of the surface plasmon resonance sensor based on gallium-doped zinc oxide and silicon for cancer detection: a wavelength interrogation approach," *Micro and Nanostructures*, vol. 186, p. 207736, 2024.
- [11] M. M. Esmaeel, N. Hmasalah, and S. A. J. J. o. M. S. M. i. E. Kakil, "Influence of green laser light on the structural and optical properties of Mg-, Mn-, and Mn+ Mg-doped copper oxide nanoparticles prepared by spin coating," *Journal of Materials Science: Materials in Electronics*, vol. 35, no. 2, p. 178, 2024.
- [12] N. Hma Salah, A. Pal, and A. J. P. Uniyal, "Enhancing Precision in Fuel Adulteration Detection: Utilizing a Wavelength Interrogation Surface Plasmon Resonance Approach," *Plasmonics*, pp. 1-10, 2024.
- [13] N. H. Salah, "Graphene-Perovskite Based Surface Plasmon Resonance Biosensor," *ZANCO Journal of Pure and Applied Sciences*, vol. 35, no. 6, pp. 28-37, 2023.
- [14] B. Karki, N. H. Salah, G. Srivastava, A. Muduli, and R. B. J. P. Yadav, "A simulation study for dengue virus detection using surface plasmon resonance sensor heterostructure of silver, barium titanate, and cerium oxide," *Plasmonics*, vol. 18, no. 6, pp. 2031-2040, 2023.
- [15] N. Hma Salah, "Sensitivity enhancement of the surface plasmon resonance-based gas sensing by few layers of black phosphorus," *Plasmonics*, vol. 18, no. 6, pp. 2225-2233, 2023.
- [16] C. R. Lavers, A. Cree, D. Jenkins, N. HmaSalah, and M. Findlay, "Performance characteristics and permittivity modeling of a surface plasmon resonance sensor for metal surface monitoring in a synthetic maritime environment," in *SPIE Future Sensing Technologies, 2020*, vol. 11525, p. 115252S: International Society for Optics and Photonics.
- [17] I. Abdullah et al., "Bias stability of solution-processed In₂O₃ thin film transistors," *Journal of Physics: Materials*, vol. 4, no. 1, p. 015003, 2020.
- [18] N. H. Salah, "Surface Plasmon Resonance Sensor of Toxic Nanoparticles in Aqueous Systems," *Eurasian Journal of Science & Engineering (EAJSE), Special Issue on Nanotechnology* vol. 4, no. 3, p. 9, 2019.
- [19] C. Laversa, A. Creea, D. Jenkinsa, N. Salaha, M. Findlaya, and I. Hooperb, "Optical Surface Plasmon Resonance Monitoring in a High Salinity Environment for Long Duration Sensing Applications," *Journal of Metallurgical Engineering*, vol. 3, no. 1, 2017.
- [20] N. Hma Salah, "Surface Plasmon Resonance Sensing and Characterisation of Nano-Colloids for Nanotoxicology Applications," Full version, Faculty of Science and Engineering, Plymouth University, UK, 2015.

[21] N. H. Salah, D. Jenkins, and R. Handy, "Graphene and its Influence in the Improvement of Surface Plasmon Resonance (SPR) Based Sensors: a Review," International Journal of Innovative Research in Advanced Engineering vol. 1, no. 10, 2014.

[22] N. H. Salah, D. Jenkins, L. Panina, R. Handy, G. Pan, and S. Awan, "Self-Sensing Surface Plasmon Resonance for the Detection of Metallic Nanoparticles," Smart Nanosystems in Engineering and Medicine, vol. 2, no. 2, pp. 10-22, 2013 2012.

Professional Affiliations and Services:

Chairman of the Scientific Promotions Committee, Department of Physics College of Science, Salahaddin University. (2024-Now)

Mambare of the Scientific Committee, Department of Physics College of Science, Salahaddin University. (2024-Now)

Chairman of Postgraduate Student Society at Plymouth University U.K. (2011-2015)

Associate professor (PhD) in Nanoscience-Physics, College of Science, Salahaddin University-Erbil

Head of Nanoscience, Department of Physics College of Science, Salahaddin University. (2024-Now)

Head of Quality Assurance at Physics Department, College of Science, Salahaddin University. (2016--2024).

Professional Development and Qualifications:

- RENAC Trainer Certificate (**Photovoltaic Systems Technology**)
- RENAC Trainer Certificate (**Solar PV Engineers' Trainer , Train-the-Trainer**)
- LabVIEW programming.
- Wolfram Mathematica.
- SolidWorks.
- Ocean Optics Spectrometer Software
- MS Word, Excel, PowerPoint, Outlook, Browsing the internet.

Professional Network Accounts:

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