Nassar Nasser Asemi

Date of birth: 15/08/1985 | **Nationality:** Yemeni | **Phone number:** (+966) 537781224 (Mobile) | **Email address:** nasemi@ksu.edu.sa |

Address: King Saud University, College of Science, Riyadh, 11451, Saudi Arabia (Work)

ABOUT ME

I am a **PhD** graduate in Physics with extensive experience in Nuclear Physics, Scintillation Detector Fabrication, and Nuclear Radiation Protection. My work in Nuclear Physics has involved researching and publishing on various topics, such as developing new detector designs using organic and inorganic materials and creating composite materials for gamma radiation shielding.
I also engaged in several projects within the field of environmental nanocatalysis, where I concentrated on the synthesis and application of nanocomposites aimed at environmental remediation. Additionally, I contributed to projects focused on generating lasers using dye materials.
Alongside my research, I taught practical physics in several classes while studying for my Master's and Doctoral degrees at King Saud University. This experience allowed me to share my knowledge and passion for physics, making complex concepts more understandable and engaging for students.

WORK EXPERIENCE

15/09/2014 – CURRENT Riyadh, Saudi Arabia
UNIVERSITY PHYSICS LECTURER KING SAUD UNIVERSITY

I have ten years of experience teaching physics to undergraduates, beginning as a teaching assistant after completing my bachelor's degree and continuing as a lecturer and researcher at King Saud University during my master's and doctoral studies. My expertise encompasses mechanics, thermodynamics, electromagnetism, quantum mechanics, and other fundamental principles of physics. I am dedicated to fostering a deep understanding of physics among my students, using innovative teaching methods and practical examples. Additionally, my research experience keeps me up to date with the latest advancements in the field, allowing me to bring innovative knowledge into the classroom.

Riyadh, Saudi Arabia
RESEARCHER COLLEGE OF SCIENCE

I am an experienced **researcher** at King Saud University with a strong record of publications in scintillation detectors, radiation protection, and TLDs. My work involves designing and conducting experiments, analyzing data, and presenting findings.

EDUCATION AND TRAINING

04/04/2017 – 20/07/2023 11451
PHD IN PHYSICS (NUCLEAR FIELD) King Saud University

Address King Saud University, College of Science, Riyadh, 11451

15/09/2012 – 06/03/2016 11451, Saudi Arabia
MASTER IN PHYSICS (NUCLEAR FIELD) King Saud University

Address King Saud University, College of Science, Riyadh, 11451, Saudi Arabia

15/09/2004 – 12/11/2007 Sana'a, Yemen
BACHELOR IN PHYSICS Sana'a University

LANGUAGE SKILLS

Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C1	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office | Microsoft Word | Social Media | Outlook | Microsoft Powerpoint | C++ Programming | Nuclear DAQ

ADDITIONAL INFORMATION

PUBLICATIONS

Geant4 simulation of a 3D high resolution gamma camera – 2016
Akhdar, H., Kezzar, K., Gerl, J., Aksouh, F., **Assemi, N. N.**, AlGhamdi, S., & AlGarawi, M. (2015).

Development of a gamma-ray scintillation detector based on blue-emitting oligomers and ZnO nanoparticles
– 2022
Asemi, N. N., Aljaafreh, M. J., Prasad, S., Aldawood, S., & AlSalhi, M. S. (2022).

Investigating the effect of gamma irradiation on the structural, optical, and electrical properties of bismuth-modified strontium titanate ceramics
– 2023
Kassim, H., Aljaafreh, M. J., Prasad, S., AlSalhi, M. S., **Asemi, N. N.**, & Manikandan, E. (2023).

Efficient liquid scintillator loaded with a light-emitting conjugated oligomer for beta-and gamma-ray spectroscopic measurements
– 2022
Asemi, N. N., Aljaafreh, M. J., Prasad, S., Aldawood, S., AlSalhi, M. S., & Aldaghri, O. (2022).

Ceria nanoparticles anchored on graphitic oxide sheets (CeO2-GOS) as an efficient catalyst for degradation of dyes and textile effluents
– 2022
Kavitha, G., Devanesan, S., **Asemi, N. N.**, Manikandan, V., Arulmozhi, R., & Abirami, N. (2022).

Design of DAMC dye as a liquid scintillator for gamma ray detection – 2023
Asemi, N. N., Aldawood, S., Prasad, S., Aljaafreh, M. J., & AlSalhi, M. S. (2023).

Concurrent fabrication of ZnO–ZnFe2O4 hybrid nanocomposite for enhancing photocatalytic degradation of organic pollutants and its bacterial inactivation
– 2023
AlSalhi, M. S., Devanesan, S., **Asemi, N. N.**, & Ahamed, A. (2023).

Construction of SnO2/CuO/rGO nanocomposites for photocatalytic degradation of organic pollutants and antibacterial applications
– 2023
AlSalhi, M. S., Devanesan, S., **Asemi, N. N.**, & Aldawsari, M. (2023).

Influence of ZnO/TiO2 nanocomposite on optical and structural properties of OC1C10–PPV–DMP thin film
Al-Asbahi, B. A., Alanezi, A. A., **Asemi, N. N.**, Qaid, S. M., & AlSalhi, M. S. (2023).

Effect of graphene and reduced graphene oxide on fluorescence and laser properties of a green emitting dye

– 2023
AlSalhi, M. S., Prasad, S., Alhandel, R. H., & **Asemi, N. N.**

Gamma radiation shielding by titanium alloy reinforced by polymeric composite materials – 2023
Saad Aldawood, **Nassar N Asemi*,** Hamoud Kassim, Aziz A Aziz, Waseem S Saeed,

Nitrogen–Fluorine co-doped TiO2/SiO2 nanoparticles for the photocatalytic degradation of acrylonitrile: Deactivation and regeneration

– 2023
Li, H., Bharti, B., Manikandan, V., AlSalhi, M. S., **Asemi, N. N**., Wang, Y., ... & Ouyang, F.

Chromium activated Ca9Al (PO4) 7 nanophosphors: synthesis, morphology and dosimetry characteristics

Sufyan A Alawsh, Saif MH Qaid, Muath Alkadi, **Nassar N Asemi**, Abdullah Ahmed Ali

Thermoluminescence glow curve analysis and kinetic parameters evaluation of different ions co-doped Ca12Al14O33 nanophosphor after y-irradiation

– 2023
Qaid, S. M., Alkadi, M., **Asemi, N. N.**, Ahmed, A. A. A., & Alawsh, S. A.

Synthesis, thermoluminescence characterizations, and photon attenuation parameters of MgAl2O4 structure doped with different ions

Saif MH Qaid, **Nassar N Asemi**, Abdullah Ahmed, Muath Alkadi, Sufyan Alawsh

Evaluation of the Capability of Coumarin Dye as a Liquid Scintillator for Gamma Ray Detection and Compton Edge Localization

Under Publication

Gamma radiation attenuation by polymeric matrices infused with nanostructure of bismuth oxide (Bi2O3) and tungsten oxide (WO3)

– 2024
Under Publication

CONFERENCES AND SEMINARS

27/03/2022 – 31/03/2022 – Riyadh, Saudi Arabia
Fabrication of a Gamma-Ray Scintillation Detector Using Organic Conjugated Materials (- 4th INTERNATIONAL FORUM ON ADVANCES IN RADIATION PHYSICS (IFARP-4)) For detecting gamma rays, new combinations of materials based on the light-emitting conjugated oligomer "9HOTF" can be used to make flexible plastic and liquid scintillator cells, which can then be used to make organic scintillators. The higher concentration of 9HOTF in the LS blend showed much-improved responsiveness for gamma-ray sources. The manufactured LSs cells showed high energy linearities. We compared the CE energies to the theoretical values, and we found a great match between theoretical and practical importance, up to 95%.

RECOMMENDATIONS

Prof. Dr. Mohammad Al-Salhi PhD Supervisour

I am writing this letter of recommendation for my PhD student, Nassar Nasser Asemi. I have had the privilege of working closely with Nassar in the field of nuclear radiation scintillation detectors, and I can attest to his exceptional talent and expertise in this area.
Based on Nassar's academic and research achievements, I have no doubt that he will make significant contributions to the field of nuclear radiation scintillation detectors in the future. Therefore, I strongly recommend him for any academic or research position
that he may apply for.

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Dr. Safar Al-Ghamdi Master Supervisor

It is my pleasure to write this recommendation for Dr. Nassar Nasser Asemi upon his request. He has known me for many years since he began working as a researcher at the nuclear physics laboratory in the physics and astronomy department at King Saud University. He obtained his M.Sc. and PhD after completing his

course and research work at the physics department's nuclear labs. As a result of his work he has published four papers in reputed ISI journals.
Dr. Asemi is capable of working independently and following through on tasks to ensure that they are completed. I have no reservations to endorse Dr. Asemi is an appointment to an academic or research position.
It would be my pleasure to provide you with any further information regarding the applicant.

Email safara@ksu.edu.sa | **Phone** (+966) 505233071

CREATIVE WORKS

Skills

- **Research experience**: I have conducted research in the fields of nuclear physics, scintillator fabrication, and radiation protection.
- **Nuclear physics knowledge**: I have experience in nuclear physics, including knowledge of Nuclear Data Acquisition Systems (DAQs), nuclear scintillation detectors, nuclear radiation shielding, and semiconductor detectors.
- **Medical physics experience**: I have taken courses in medical physics as part of my studies in nuclear medicine and environmental radiation. This is in radiation therapy, imaging techniques, and radiation safety protocols.
- **Scintillator detector fabrication**: I have experience in the fabrication of both organic and inorganic scintillators that have the ability to detect gamma, alpha, beta, and neutrons and have conducted papers on the topic.
- **Experienced physics teacher**: I have experience teaching a variety of physics subjects, including General Physics, Quantum Physics, Modern physics, Medical Physics, and Mathematical Physics, at multiple levels from high school to university.
- **Technical skills**: I have experience working with a variety of specialized equipment, including Nuclear Data Acquisition systems, scintillation and semiconductor detectors, and laboratory equipment.
- **Analytical skills**: I am proficient in data analysis and have experience using software such as C++, MATLAB, ROOT, and Python for data processing.
- **Communication skills**: I have experience presenting my research findings at conferences and writing scientific papers for publication.
- I have valuable experience in **GENT4 Montecarlo** simulation.