

Kingdom of Saudi Arabia
Ministry of Higher Education
Majmaah University
College of Science in Al-Zulfi



المملكة العربية السعودية
وزارة التعليم العالي
جامعة المجمعة
كلية العلوم بالزلفي

Research Groups in Physics Departments

Nuclear and Radiation Physics Group (NRPG)

The Nuclear and Radiation Physics Group (NRPG) is a research group of the Department of Physics at the College of Science of Majmaah University. The group performs a research activity in both experimental and theoretical nuclear physics in addition to radiation physics.

Scientific Research Priorities

- 1) Radiation detection and measurement.
- 2) Lifetime measurement of excited nuclear states.
- 3) Alpha decay studies.
- 4) Structure of unstable nuclei.
- 5) Low energy heavy-ion reactions.
- 6) Properties of superheavy nuclei..

Objectives

- Using different radioactive ion beams to study the excited nuclear states.
- Quantitative measurements of radioactivity of soil, food and water samples.
- Applying and developing advanced theoretical models for the study of heavy-ion reactions.
- Investigating the stability of superheavy elements and identifying their properties.
- Calculating alpha-decay half-lives around shell closures.

Group Members

- Dr. Thamer Al-Harbi (Head of the Group)
- Dr. Mohamed Abou-Shayeb
- Dr. Mohamed Shaker
- Dr. Ahmed Adel

Materials Science Group (MSG)

The Materials Science Group (MSG) is one of the research groups that are leading the scientific research in the Department of Physics at the College of Science / Majmaah University. The main core of this research group is formed by solid state physicists who will mainly focus on the experimental studies of all different materials.

Scientific Research Priorities

- 1) Preparing and processing the following materials:
 - a) Glasses and ceramics.
 - b) Polymers.
 - c) Composites
 - d) Nanomaterials.
 - e) Semiconductors.
 - f) Biomaterials.
 - g) Metals.
- 2) Studying the thermal, electrical, optical, mechanical and morphological properties of the upper materials.
- 3) Solar cell materials and its energy applications.
- 4) Advanced materials.

Objectives

- To publish genuine and highly classified research papers in authentic journals.
- To attract external funding from major supporters such as KACST, SABIC,...etc.
- To collaborate with national and international research groups.
- To improve the research capabilities of our students and prepare them for their graduate studies.
- To educate the local community about the research culture and interests.
- To partnership with local industry and help solving its problems.

Group Members

- Prof. Abdulmajed Abdulmajid. (Head of the group)
- Prof. Mohamed Al-Zaidi.
- Dr. Mohamed Gaafar.
- Dr. Samir Al-Zobaidi.
- Dr. Hasan Hanafy.
- Dr. Mohammed Adam.
- Dr. Muhammad Arshad Kamran.
- Dr. Khaled Abdesalem.