

UAE RESEARCH ASSISTANTSHIPS AY17-18

POSITION DESCRIPTION

| | |
|----------------------------------|--|
| POSITION TITLE: | RESEARCH ASSISTANT IN PETROLEUM RESEARCH |
| RESEARCH PROJECT TITLE: | PREPARATION AND TESTING OF NEW INHIBITORS FOR ORGANIC SCALE |
| FACULTY NAME & TITLE: | PANCE NAUMOV, ASSOCIATE PROFESSOR OF CHEMISTRY |

RESEARCH PROJECT DESCRIPTION

The oil and gas sector is a vital component of Abu Dhabi's economy. Before the discovery of oil, Abu Dhabi was largely an underdeveloped desert area. All of this changed after the discovery of oil in late 1950s, when the area started to transform into a modern metropolis. Presently this sector accounts for almost 50% of Abu Dhabi's GDP.

Chemically, petroleum is a natural mixture formed by decomposition of living organisms under high temperature and pressure over millions of years. It is an extraordinarily diverse mixture of mostly organic compounds with a varying chemical composition. However, enhanced extraction of oil, brings not only the oil to the surface, but also challenges with handling of the side products from its processing.

In the project, the student will work with the members of the Naumov group to **design, prepare and test new chemical inhibitors** for organic scale deposition in oil reservoirs. The chemical structure of these inhibitors will be tuned to target the problems in the Emirate of Abu Dhabi, where some oil wells suffer severely from this problem, one that will likely increase with the ongoing shift toward use of CO₂ for enhanced oil recovery.

RESPONSIBILITIES OF THE POSITION

- Design, preparation, characterization and testing of novel chemical inhibitors for organic scale
- Chemical analysis and characterization of oil from Abu Dhabi oil reservoirs
- Active participation in the research activities of the Naumov Research Group, including participation in weekly group seminars

ESSENTIAL QUALIFICATIONS:

BSc or MSc in chemistry, physics, or related physical sciences.

PREFERRED EXPERIENCE / SKILLS:

The candidate should be highly motivated and enthusiastic to pursue supervised research work, on a research project assigned by Dr. Naumov. The candidate should have basic practical experience of working in a chemical research laboratory.

APPLICANTS TO PROVIDE:

1. Statement of interest in the position
2. Transcript of degree(s)
3. CV
4. Two letters of recommendation