

Interdisciplinary Research Center for Construction and Building Materials **Search for the Post-Doctoral Research Fellows**

Closing date - open until filled.

The broad discipline of the candidate – Civil Engineering/ Architecture/ Chemistry/Chemical Engineering/Material Science/Computer Science/ Mechanical Engineering

We are looking for postdoctoral research fellows to join the newly formed Interdisciplinary Research Center for Construction and Building Materials at King Fahd University of Petroleum & Minerals. The applicants who have completed their Ph.D. from a reputed university or are about to do so are encouraged to apply.

The selected candidates are expected to assist Senior faculty/Researchers in developing new and smart building and construction materials; model the behavior of materials; create research tools; mentor Ph.D., M.Sc., and/or B.Sc. students in their research work; write research proposals and reports; publish research papers and file patents; and disseminate the research outcomes to the society.

The applicants should have research experience in one or more of the research areas noted below, as evidenced through their theses and published work. Candidates with knowledge of materials characterization using advanced techniques such as SEM, XRD, XRF, FESEM, FTIR, DSC, TG/DTA, etc. will be given preference.

- Environment-friendly materials incorporating natural/industrial waste materials.
- Composite materials, including smart construction materials.
- Non-metallic materials in the buildings and infrastructures
- Energy-efficient materials and systems suitable for severe climatic conditions
- Cementitious materials incorporating nanomaterials.
- Highway, railway, and airport materials and infrastructures.
- Innovative digital manufacturing techniques, including 3D printing of materials (concrete, rammed earth, etc.).
- Water footprint analysis for building and construction materials
- Carbon footprint analysis for building and construction materials.
- Applications for carbon utilization in building and construction materials
- Self-cleaning materials & coatings for indoor air quality control
- Self-cleaning advanced glass and clay tiles for aesthetics.
- Eco & environmentally friendly green & recycled materials for noise pollution control.
- Structural health monitoring.
- Molecular-level simulations of materials
- Applications of machine learning and artificial intelligence to modeling materials, construction systems, and inspections.
- Modeling of composite/non-composite structural elements.

We thank all applicants for their interest. However, only those individuals selected for an interview will be contacted.