جامعة الملك فهد للبترول والمعادن
King Fahd University of Petroleum & Minerals

Center	**Interdisciplinary Research Center for Advanced Materials**
Job Title	**Post-Doctoral Fellow**
Job Description	The center invites applications for post-doctoral research positions in the following areas: • **Advanced Surface Engineering and Coatings:** Enhancement of surface properties such as adhesion, wettability, wear resistance, corrosion resistance, and biocompatibility. • **Alloy Design and Development**: Focus on lightweight alloys and sustainable steels. • **Multifunctional Composites**: Design and processing of polymer, metal, and ceramic composites for structural, thermal, and biomedical applications. • **Smart and Self-Healing Materials**: Development and application of materials with autonomous functionality. • **Materials for Extreme Environments**: Innovation and testing of materials capable of withstanding extreme conditions. • **Computational Modeling and Artificial Intelligence**: Application of computational techniques and AI for materials discovery, design, optimization, and processing. • **Quantum Materials:** Research and development of materials with quantum mechanical properties. • **Graphene and 2D Materials:** Development, synthesis, and characterization of graphene and other 2D materials. • **Thermoelectric Materials**: Synthesis, characterization, and application of materials for thermoelectric energy conversion. • **Additive Manufacturing**: Development of new alloys, composites, and advanced ceramics to be fabricated by 3D printing. • **Materials Degradation and Failure**: Study of degradation mechanisms in materials for next-generation batteries, carbon capture systems, hydrogen transport and storage, and advanced nuclear systems. Outstanding candidates with good experience and strong background in any of these areas are encouraged to apply. The successful applicants will have opportunities to work in an interdisciplinary and collaborative research environment with access to state-of-the-art facilities. Preference will be given for candidates who have extensive hand-on experience in advanced materials processing, characterizations or testing.
Job Responsibility	• Contribute to the ongoing research projects in the center. • Conduct basic and applied research. • Develop advanced products and technology. • Publish findings or creative work. • Write research proposals. • Teach courses
Qualification	1. A Ph.D. degree in Materials Engineering, Mechanical Engineering, Physics, Chemistry, or a related field from a reputable institution. 2. In-depth knowledge and a strong record of published research in one or more of the areas described in the Job Description.