한국과학기술원 NCS 기반 직무기술서

Recruitment area	Research (Post-Doc)	분류체계	Parent category	Sub-category	Sub sub-category	Sub sub-sub-category

Mission	○ Korea Advanced Institute of Science and Technology (KAIST) Act 　- Educating outstanding talent proficient in theory and practice as required in the fields of science and technology for industrial development 　- Carrying out the nation's mid- and long-term R&D, and basic and applied research to foster national competitiveness in science and technology 　- Providing comprehensive support to research conducted by other research centers and industries
KAIST's major businesses	○ Education: Fostering creative talent, strengthening convergence education, nurturing global leaders in science and technology, strengthening human resource capacity ○ Research: Support for development of outstanding research projects, acquisition of specialized researchers, advancement of entrepreneurial culture, creation of high value-added intellectual property rights, promotion of technology transfer/commercialization, and development of large-scale, leading projects ○ Cooperation: Creating a working environment to be at par with global standards, and multifaceted cooperation for global leadership ○ Administration: Provision of administrative and technical service for international students/ faculty (Support for operation of a "Korean-English bilingual campus")
Growth engines	○ Vision: Global Value-Creative World-Leading University 　- Hub for Fostering Knowledge Creation and Global Convergence Talents 　- Center for the World-Leading New Knowledge and Technology) ○ Five innovation initiatives: Innovation in education, research, technology commercialization, globalization and future strategies ○ 3C Leadership: Change, Communication, Care
Duties and responsibilities	○ Perform research and create knowledge as a post-doctoral researcher in Center for Lattice Defectronics at KAIST
Job performance details	* To be determined within the following topics, considering the applicant's research experience and interest. ○ Synthesis and characterization of transition metal oxide thin films, interfaces, superlattices ○ Exploration of nanoscale magnetic/ferroelectric/ferroelastic/multiferroic domain (wall) structures and low dimensional functional properties ○ Examination of topological defects and electron/ion transport (for fundamental knowledge and neuromorphic devices)
Knowledge required	Basic knowledge as a Ph.D. researcher in the field of condensed matter physics and materials science
Required skills	* Experience with some of the techniques below is preferred, but not necessarily required. 　○ Synthesis and characterization of epitaxial oxide thin films 　○ Scanning probe microscopy for measurement of domain (wall) structure, conductivity, and

	electrochemical reaction ○ Confocal Raman spectro-microscopy ○ Synchrotron-based X-ray scattering or spectroscopy ○ Measurement of quantum electron transport in extreme environments ○ Transmission electron microscope ○ Theoretical modeling and simulation
Attitude while performing duties	○ Compliance with research ethics ○ Active attitude and willingness to challenge
Basic skills	Candidates and holders of Ph.D. degrees in science and engineering
Reference site	www.ncs.go.kr, www.kaist.ac.kr, physics.kaist.ac.kr, oxide.kaist.ac.kr