KAIST NCS Job Description

<table>
<tr><td rowspan="2">Recruitment area</td><td rowspan="2">Research (Post-Doc)</td><td rowspan="2">Classification system</td><td>Parent category</td><td>Sub-category</td><td>Sub sub-category</td><td>Sub sub-sub-category</td></tr>
<tr><td rowspan="2">science and engineering</td><td>*Electronics</td><td>01.Semiconductor</td><td rowspan="2"></td></tr>
<tr><td>*Electronic Materials</td><td>01.Semiconductor process
02.Semiconductor device
03.Semiconductor physics</td></tr>
<tr><td>Mission</td><td colspan="6">○ 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</td></tr>
<tr><td>KAIST's major businesses</td><td colspan="6">○ 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")</td></tr>
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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 the School of EE at KAIST
Job performance details	* To be determined within the following topics, considering the applicant's research experience and interest. ○ Atomic layer deposition of ferroelectric and high-k dielectric together with electrical/reliability characterization ○ Research on dynamic transient switching phenomena in hafnia ferroelectric systems ○ Exploration of ferroelectric and anti-ferroelectric materials and functionalities ○ Research on ferroelectric transistor-based device/ion transport (for fundamental knowledge and neuromorphic devices)
Knowledge required	Basic knowledge as a Ph.D. researcher in the field of ferroelectric materials and device in the EE background
Required skills	* Experience with some of the techniques below is preferred, but not necessarily required. ○ deposition and characterization of hafnia ferroelectric thin films ○ Device characterization (DC and Transient Electrical Characterization) ○ Device Integration ○ 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, antonis.kaist.ac.kr