

# Job Description ①

<b>Workplace</b>	Center for Artificial Low Dimensional Electronic Systems (POHANG, POSTECH)	<b>Job category (level)</b>	Postdoctoral research associate	<b>Area of hiring</b>	Research
<b>Work duties</b>	Synthesis and single crystal growth of quantum materials				
<b>Main business of IBS</b>	<ul style="list-style-type: none"> <li>o Founded under the Special Act on Establishment of and Support for International Science and Business Belt, the Institute for Basic Science (IBS) conducts fundamental research in the fields of basic science, contributing to developing and delivering scientific knowledge and innovative technology, as well as nurturing the next generation of scientists.</li> <li>– Basic science research</li> <li>– Interdisciplinary basic science research in science and technology</li> <li>– Convergence between basic science and humanities, social science and culture and arts</li> <li>– Policy research for setting the direction of basic science research</li> <li>– Programs for establishing and utilizing research facilities and equipment</li> <li>– Management, transfer, utilization and commercialization of research outcomes</li> </ul>				
<b>Research area of the Center</b>	<ul style="list-style-type: none"> <li>o Research on novel electronic, magnetic, and topological properties in low-dimensional quantum systems controlled at the atomic level</li> </ul>				
<b>Duties and responsibilities</b>	<ul style="list-style-type: none"> <li>o Materials synthesis and single crystal growth of low-dimensional quantum materials and topological materials</li> </ul>				
<b>Knowledge required</b>	<ul style="list-style-type: none"> <li>o knowledge in condensed matter physics and materials science(Doctoral degree)</li> </ul>				
<b>Competencies required</b>	<ul style="list-style-type: none"> <li>o Materials synthesis and single crystal growth techniques for quantum materials</li> </ul>				
<b>Attitude required</b>	<ul style="list-style-type: none"> <li>o Communication through cooperation</li> <li>o rational thinking and action for solving problems</li> <li>o Creative work attitude for research in various fields of physics</li> </ul>				
<b>Basic Job Skills</b>	<ul style="list-style-type: none"> <li>o Communication Skills, Numerical Skills, Problem-Solving Skills, Interpersonal Skills, Information Literacy, Organizational Understanding, Professional Ethics</li> </ul>				
<b>Qualification</b>	<ul style="list-style-type: none"> <li>o Required Qualifications: Ph.D. degree in the related field such as solid-state physics, materials science(obtained within recent 5 years or to be obtained within 3 months from the expected start date(September 16, 2025))</li> <li>o Preference : Expertise in synthesis and single crystal growth of quantum materials</li> </ul>				
<b>Screening</b>	<ul style="list-style-type: none"> <li>o Stage 1: Document screening → Stage 2: Interview</li> </ul>				

※ This job description states the major work duties of the hiring area. Work duties that are not stated here may need to be performed.

## Job Description ②

<b>Workplace</b>	Center for Artificial Low Dimensional Electronic Systems (POHANG, POSTECH)	<b>Job category (level)</b>	Postdoctoral research associate	<b>Area of hiring</b>	Research
<b>Work duties</b>	Investigation of electronic properties of low dimensional materials with scanning tunneling microscopy				
<b>Main business of IBS</b>	<ul style="list-style-type: none"> <li>o Founded under the Special Act on Establishment of and Support for International Science and Business Belt, the Institute for Basic Science (IBS) conducts fundamental research in the fields of basic science, contributing to developing and delivering scientific knowledge and innovative technology, as well as nurturing the next generation of scientists.</li> <li>– Basic science research</li> <li>– Interdisciplinary basic science research in science and technology</li> <li>– Convergence between basic science and humanities, social science and culture and arts</li> <li>– Policy research for setting the direction of basic science research</li> <li>– Programs for establishing and utilizing research facilities and equipment</li> <li>– Management, transfer, utilization and commercialization of research outcomes</li> </ul>				
<b>Research area of the Center</b>	o Research on novel electronic, magnetic, and topological properties in low-dimensional quantum systems controlled at the atomic level				
<b>Duties and responsibilities</b>	o Research on electronic properties of low-dimensional quantum materials using STM				
<b>Knowledge required</b>	o knowledge in condensed matter physics and materials science(Doctoral degree)				
<b>Competencies required</b>	o Skills in STM operation and ultrahigh vacuum systems				
<b>Attitude required</b>	<ul style="list-style-type: none"> <li>o Communication through cooperation</li> <li>o rational thinking and action for solving problems</li> <li>o Creative work attitude for research in various fields of physics</li> </ul>				
<b>Basic Job Skills</b>	o Communication Skills, Numerical Skills, Problem-Solving Skills, Interpersonal Skills, Information Literacy, Organizational Understanding, Professional Ethics				
<b>Qualification</b>	<ul style="list-style-type: none"> <li>o Required Qualifications: Ph.D. degree in the related field such as solid-state physics, materials science(obtained within recent 5 years or to be obtained within 3 months from the expected start date(September 16, 2025))</li> <li>o Preference : Expertise in scanning tunneling microscopy</li> </ul>				
<b>Screening</b>	o Stage 1: Document screening → Stage 2: Interview				

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