

Job Description ①

Workplace	Center for Van der Waals Quantum Solids (POSTECH, Pohang)	Job category (level)	Postdoctoral Research Associate	Area of hiring	Research
Work duties	<ul style="list-style-type: none"> - Synthesis of bulk quantum magnetic materials. - Characterization of structural, magnetic, thermodynamic, electronic properties of quantum magnetic materials. 				
Main business of IBS	<p>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.</p> <ul style="list-style-type: none"> - Basic science research - Interdisciplinary basic science research in science and technology - Convergence between basic science and humanities, social science and culture and arts - Policy research for setting the direction of basic science research - Programs for establishing and utilizing research facilities and equipment - Management, transfer, utilization and commercialization of research outcomes 				
Research area of the Center	<ul style="list-style-type: none"> - Bulk growths of quantum magnets and their magnetism study using neutrons 				
Duties and responsibilities	<ul style="list-style-type: none"> - Synthesis of bulk quantum magnetic materials by using solid-state reaction, flux method, and chemical vapor transport method and characterizations. - Neutron diffraction and symmetry analysis to determine magnetic structures - Inelastic neutron scattering and symmetry analysis to determine exchange couplings 				
Knowledge/Competencies required	<ul style="list-style-type: none"> - Research experience in quantum magnetic materials - Understanding and experience in the growth of bulk polycrystalline powder and single crystals: flux, chemical vapor transport methods, etc - Understanding and experience in elastic or inelastic neutron scattering: magnetic structure and spin dynamics, etc 				
Attitude required	<ul style="list-style-type: none"> - Research cooperation with active communication - Reasonable thinking/actions to solve problems - Consistent Integrity 				
Basic Job Skills	<ul style="list-style-type: none"> - Communication Skills, Numerical Skills, Problem-Solving Skills, Interpersonal Skills, Information Literacy, Organizational Understanding, Professional Ethics 				
Qualification	<ul style="list-style-type: none"> - Ph.D. degree in the related field of Recruitment Area (obtained within recent 5 years or to be obtained within 3 months from the appointment start date) - Experience in related fields preferred 				
Screening	<p>Stage 1: Document screening → Stage 2: Interview</p>				

► 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

Workplace	Center for Van der Waals Quantum Solids (POSTECH, Pohang)	Job category (level)	Postdoctoral Research Associate	Area of hiring	Research
Work duties	<ul style="list-style-type: none"> - Fabrication of two-dimensional van der Waals heterostructures - Exploring the microscopic properties of two-dimensional quantum materials - Scanning Tunneling Microscopy (STM) Measurement 				
Main business of IBS	<p>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.</p> <ul style="list-style-type: none"> - Basic science research - Interdisciplinary basic science research in science and technology - Convergence between basic science and humanities, social science and culture and arts - Policy research for setting the direction of basic science research - Programs for establishing and utilizing research facilities and equipment - Management, transfer, utilization and commercialization of research outcomes 				
Research area of the Center	<ul style="list-style-type: none"> - Research on new microscopic physical phenomena in van der Waals quantum material and devices 				
Duties and responsibilities	<ul style="list-style-type: none"> - Fabrication of two-dimensional van der Waals heterostructures - Exploring the microscopic properties of two-dimensional quantum materials - Scanning Tunneling Microscopy (STM) Measurement 				
Knowledge/Competencies required	<ul style="list-style-type: none"> - Degree in the related field - Understanding of condensed matter physics in 2D materials. - Expertise in operating Scanning Tunneling Microscope and analyzing the data. - Expert knowledges of cryogenics and UHV. 				
Attitude required	<ul style="list-style-type: none"> - Research cooperation with active communication - Reasonable thinking/actions to solve problems. - Consistent Integrity 				
Basic Job Skills	<ul style="list-style-type: none"> - Communication Skills, Numerical Skills, Problem-Solving Skills, Interpersonal Skills, Information Literacy, Organizational Understanding, Professional Ethics 				
Qualification	<ul style="list-style-type: none"> - Ph.D. degree in the related field of Recruitment Area (obtained within recent 5 years or to be obtained within 3 months from the appointment start date) - Experience in related fields preferred 				
Screening	Stage 1: Document screening → Stage 2: Interview				

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Job Description ③

Workplace	Center for Van der Waals Quantum Solids (POSTECH, Pohang)	Job category (level)	Postdoctoral Research Associate	Area of hiring	Research
Work duties	<ul style="list-style-type: none"> - MOCVD thin films synthesis - Growth and characterization of two-dimensional semiconducting materials 				
Main business of IBS	<p>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.</p> <ul style="list-style-type: none"> - Basic science research - Interdisciplinary basic science research in science and technology - Convergence between basic science and humanities, social science and culture and arts - Policy research for setting the direction of basic science research - Programs for establishing and utilizing research facilities and equipment - Management, transfer, utilization and commercialization of research outcomes 				
Research area of the Center	<ul style="list-style-type: none"> - Synthesis of epitaxial van der Waals quantum materials and research on new physical phenomena 				
Duties and responsibilities	<ul style="list-style-type: none"> - MOCVD thin films synthesis - Growth and characterization of two-dimensional semiconducting materials 				
Knowledge/Competencies required	<ul style="list-style-type: none"> - Degree in the related field (physics, chemistry, materials science, electrical engineering) - Understanding of materials synthesis and technology using related equipment - Ability to utilize for relevant thin film growth and measurement tools and interpret data 				
Attitude required	<ul style="list-style-type: none"> - Research cooperation with active communication - Reasonable thinking/actions to solve problems - Consistent Integrity 				
Basic Job Skills	<ul style="list-style-type: none"> - Communication Skills, Numerical Skills, Problem-Solving Skills, Interpersonal Skills, Information Literacy, Organizational Understanding, Professional Ethics 				
Qualification	<ul style="list-style-type: none"> - Ph.D. degree in the related field of Recruitment Area (obtained within recent 5 years or to be obtained within 3 months from the appointment start date) - Experience in related fields preferred 				
Screening	Stage 1: Document screening → Stage 2: Interview				

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Job Description ④

Workplace	Center for Van der Waals Quantum Solids (POSTECH, Pohang)	Job category (level)	Postdoctoral Research Associate	Area of hiring	Research
Work duties	<ul style="list-style-type: none"> - Laser spectroscopy measurement of vdW quantum materials - Laser spectroscopy set-up construction - Theoretical calculation of band structure and optical responses of vdW quantum materials 				
Main business of IBS	<p>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.</p> <ul style="list-style-type: none"> - Basic science research - Interdisciplinary basic science research in science and technology - Convergence between basic science and humanities, social science and culture and arts - Policy research for setting the direction of basic science research - Programs for establishing and utilizing research facilities and equipment - Management, transfer, utilization and commercialization of research outcomes 				
Research area of the Center	<ul style="list-style-type: none"> - Novel light-matter interaction in van der Waals quantum material 				
Duties and responsibilities	<ul style="list-style-type: none"> - Laser spectroscopy measurement of vdW quantum materials - Laser spectroscopy set-up construction - Theoretical calculation of band structure and optical responses of vdW quantum materials 				
Knowledge/Competencies required	<ul style="list-style-type: none"> - Degree in the related field - Understanding of material synthesis and technology using related equipment - Ability to utilize for relevant measurement tools and interpret data 				
Attitude required	<ul style="list-style-type: none"> - Research cooperation with active communication - Reasonable thinking/actions to solve problems - Consistent Integrity 				
Basic Job Skills	<ul style="list-style-type: none"> - Communication Skills, Numerical Skills, Problem-Solving Skills, Interpersonal Skills, Information Literacy, Organizational Understanding, Professional Ethics 				
Qualification	<ul style="list-style-type: none"> - Ph.D. degree in the related field of Recruitment Area (obtained within recent 5 years or to be obtained within 3 months from the appointment start date) - Experience in related fields preferred 				
Screening	Stage 1: Document screening → Stage 2: Interview				

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Job Description ⑤

Workplace	Center for Van der Waals Quantum Solids (POSTECH, Pohang)	Job category (level)	Postdoctoral Research Associate	Area of hiring	Research
Work duties	<ul style="list-style-type: none"> - Low temperature electron transport, experimental - Low temperature quantum transport, experimental 				
Main business of IBS	<p>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.</p> <ul style="list-style-type: none"> - Basic science research - Interdisciplinary basic science research in science and technology - Convergence between basic science and humanities, social science and culture and arts - Policy research for setting the direction of basic science research - Programs for establishing and utilizing research facilities and equipment - Management, transfer, utilization and commercialization of research outcomes 				
Research area of the Center	<ul style="list-style-type: none"> - Exploring the electronic properties of van der Waals materials devices 				
Duties and responsibilities	<ul style="list-style-type: none"> - Low temperature electron transport, experimental - Low temperature quantum transport, experimental 				
Knowledge/Competencies required	<ul style="list-style-type: none"> - Degree in the related field - Synthesis of nanomaterial /Ability to manufacture elements and explore physical phenomena 				
Attitude required	<ul style="list-style-type: none"> - Research cooperation with active communication - Reasonable thinking/actions to solve problems - Consistent Integrity 				
Basic Job Skills	<ul style="list-style-type: none"> - Communication Skills, Numerical Skills, Problem-Solving Skills, Interpersonal Skills, Information Literacy, Organizational Understanding, Professional Ethics 				
Qualification	<ul style="list-style-type: none"> - Ph.D. degree in the related field of Recruitment Area (obtained within recent 5 years or to be obtained within 3 months from the appointment start date) - Experience in related fields preferred 				
Screening	Stage 1: Document screening → Stage 2: Interview				

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