

## 【Job Description for Research Scientist(Full-time) Recruitment for 2025 – 1】

Area of recruitment	Synchrotron accelerator development – Control / Diganostics				
Academic major	Computer engineering, Accelerator engineering, related major	Job position	Research Scientist	Locations	Ochang, Pohang
NCS category	Main Category	Category		Sub-Category	
KBSI mission	<ul style="list-style-type: none"> <li>□ Conducting R&amp;D on research facilities &amp; equipment and analytical S&amp;T, and joint research and support for promoting basic science, the foundation of the national science and technology development</li> </ul>				
KBSI main functions	<ul style="list-style-type: none"> <li>□ Research support and joint research through the development and operation of cutting-edge large-scale research equipment</li> <li>□ Development of analytical technology and equipment through analytical science research</li> <li>□ In charge of general management of national research facilities and equipment</li> <li>□ Fostering research equipment experts and creative future talent</li> </ul>				
General requirements	Age and gender	Not specified			
Educational requirements	<b>Academic Background</b>	<b>Doctoral degree</b>			
Required job duties	<ul style="list-style-type: none"> <li>□ Design and construction of Korea-4GSR control system</li> <li>□ Development, fabrication, and performance test of Korea-4GSR diagnostics</li> </ul>				
Capacity and ability	<ul style="list-style-type: none"> <li>□ Experience in development and operation of EPICS-based accelerator control system</li> <li>□ Experience in development and operation of electron beam diagnostic equipment</li> </ul>				
Required knowledge	<ul style="list-style-type: none"> <li>□ Knowledge of programming languages like C/C++ and Python</li> <li>□ Understanding of accelerator timing system, interlock system, and feedback system</li> <li>□ Data processing and analysis of diagnostics</li> </ul>				
Required skills	<ul style="list-style-type: none"> <li>□ EPICS IOC development skills and Linux-based programming skills</li> <li>□ Electromagnetic field finite element simulation (CST, COMSOL) and high-frequency signal processing skills</li> </ul>				
Attitude in performing duties	<ul style="list-style-type: none"> <li>□ Accurate work processing attitude and efficient work performance ability</li> <li>□ Proactive, responsible, and diligent attitude to solve a problem</li> <li>□ An exploratory attitude towards new knowledge and skills</li> <li>□ Positive and active communication attitude</li> <li>□ Efforts oriented towards teamwork</li> </ul>				
Reference websites	<ul style="list-style-type: none"> <li>□ <a href="http://www.ncs.go.kr">www.ncs.go.kr</a> (except for the undeveloped jobs in NCS)</li> <li>- The above job description was prepared through a separate analysis.</li> <li>□ <a href="http://www.kbsi.re.kr">http://www.kbsi.re.kr</a> (KBSI website)</li> <li>□ <a href="https://kbsi.recruiter.co.kr">https://kbsi.recruiter.co.kr</a> (KBSI application site)</li> </ul>				

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## 【Job Description for Research Scientist(Full-time) Recruitment for 2025 – 2】

<b>Area of recruitment</b>	<b>Synchrotron accelerator development – Magnet Power Supply</b>				
<b>Academic major</b>	<b>Power/Electronics, related major</b>	<b>Job position</b>	<b>Research Scientist</b>	<b>Locations</b>	<b>Ochang, Pohang</b>
<b>NCS category</b>	Main Category	Category		Sub-Category	
<b>NCS category</b>	A separate analysis was performed to prepare the following contents as the NCS has not developed job categories corresponding to the job duties				
<b>KBSI mission</b>	<ul style="list-style-type: none"> <li>□ Conducting R&amp;D on research facilities &amp; equipment and analytical S&amp;T, and joint research and support for promoting basic science, the foundation of the national science and technology development</li> </ul>				
<b>KBSI main functions</b>	<ul style="list-style-type: none"> <li>□ Research support and joint research through the development and operation of cutting-edge large-scale research equipment</li> <li>□ Development of analytical technology and equipment through analytical science research</li> <li>□ In charge of general management of national research facilities and equipment</li> <li>□ Fostering research equipment experts and creative future talent</li> </ul>				
<b>General requirements</b>	Age and gender	Not specified			
<b>Educational requirements</b>	<b>Academic Background</b>	<b>Doctoral degree</b>			
<b>Required job duties</b>	<ul style="list-style-type: none"> <li>□ Research and development of Korea-4GSR magnet power supplies</li> <li>□ Establishment, operation, maintenance, and performance improvement of Korea-4GSR power supply system</li> </ul>				
<b>Capacity and ability</b>	<ul style="list-style-type: none"> <li>□ Experience in design and performance test of magnet power supplies</li> <li>□ Design experience in Gate Drivers, Analog/Digital Controllers, and Protection circuits for power supplies</li> </ul>				
<b>Required knowledge</b>	<ul style="list-style-type: none"> <li>□ Knowledge of high-efficiency converter topology design and optimization</li> <li>□ Knowledge of high-voltage DC power supply and pulse modulator topologies</li> <li>□ Knowledge of power supply system performance measurement and evaluation</li> </ul>				
<b>Required skills</b>	<ul style="list-style-type: none"> <li>□ High-precision/high-voltage power supply system topology design skills</li> <li>□ Power supply Gate Driver, Analog/Digital Controller, and Protection circuit design skills</li> <li>□ High-precision/high-voltage precise measurement and performance evaluation skills</li> </ul>				
<b>Attitude in performing duties</b>	<ul style="list-style-type: none"> <li>□ Accurate work processing attitude and efficient work performance ability</li> <li>□ Proactive, responsible, and diligent attitude to solve a problem</li> <li>□ An exploratory attitude towards new knowledge and skills</li> <li>□ Positive and active communication attitude</li> <li>□ Efforts oriented towards teamwork</li> </ul>				
<b>Reference websites</b>	<ul style="list-style-type: none"> <li>□ <a href="http://www.ncs.go.kr">www.ncs.go.kr</a> (except for the undeveloped jobs in NCS)</li> <li>- The above job description was prepared through a separate analysis.</li> <li>□ <a href="http://www.kbsi.re.kr">http://www.kbsi.re.kr</a> (KBSI website)</li> <li>□ <a href="https://kbsi.recruiter.co.kr">https://kbsi.recruiter.co.kr</a> (KBSI application site)</li> </ul>				

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## [Job Description for Research Scientist(Full-time) Recruitment for 2025 – 3]

Area of recruitment	Synchrotron Science – Coherent X-ray Scattering				
Academic major	Physics, Chemistry, Materials Science, related major.	Job position	Research Scientist	Locations	Ochang, Pohang
NCS category	Main Category	Category		Sub-Category	
NCS category	A separate analysis was performed to prepare the following contents as the NCS has not developed job categories corresponding to the job duties				
KBSI mission	<ul style="list-style-type: none"> <li>□ Conducting R&amp;D on research facilities &amp; equipment and analytical S&amp;T, and joint research and support for promoting basic science, the foundation of the national science and technology development</li> </ul>				
KBSI main functions	<ul style="list-style-type: none"> <li>□ Research support and joint research through the development and operation of cutting-edge large-scale research equipment</li> <li>□ Development of analytical technology and equipment through analytical science research</li> <li>□ In charge of general management of national research facilities and equipment</li> <li>□ Fostering research equipment experts and creative future talent</li> </ul>				
General requirements	Age and gender	Not specified			
Educational requirements	<b>Academic Background</b>	<b>Doctoral degree</b>			
Required job duties	<ul style="list-style-type: none"> <li>□ Experiment &amp; Research using synchrotron coherent X-ray scattering techniques</li> <li>□ Development of measurement devices and analysis techniques using coherent x-ray scattering (Participation in 4GSR construction project)</li> <li>□ Performing R&amp;D using coherent x-ray scattering measurements</li> </ul>				
Capacity and ability	<ul style="list-style-type: none"> <li>□ Understanding of coherent x-ray scattering using synchrotron radiation source</li> <li>□ Capabilities for development and operation of experimental instrumentation and beamline for coherent x-ray scattering</li> <li>□ Capabilities for collaborate research and international cooperation</li> </ul>				
Required knowledge	<ul style="list-style-type: none"> <li>□ Research/Analytical knowledge related to coherent x-ray scattering techniques</li> <li>□ Knowledge related instrumentation and beamline for coherent x-ray scattering</li> </ul>				
Required skills	<ul style="list-style-type: none"> <li>□ Data acquisition and analysis skills for coherent X-ray scattering experiments</li> <li>□ Skills for utilizing software of reconstruction process from coherent X-ray scattered data</li> <li>□ Skills related to installation of 2D area X-ray detectors, data acquisition, analysis, etc. in coherent X-ray scattering beamline</li> </ul>				
Attitude in performing duties	<ul style="list-style-type: none"> <li>□ Proactive, responsible, and diligent attitude to solve a problem</li> <li>□ An exploratory attitude towards new knowledge and skills</li> <li>□ Positive and active communication attitude</li> <li>□ Efforts oriented towards teamwork</li> </ul>				
Reference websites	<ul style="list-style-type: none"> <li>□ <a href="http://www.ncs.go.kr">www.ncs.go.kr</a> (except for the undeveloped jobs in NCS)</li> <li>- The above job description was prepared through a separate analysis.</li> <li>□ <a href="http://www.kbsi.re.kr">http://www.kbsi.re.kr</a> (KBSI website)</li> <li>□ <a href="https://kbsi.recruiter.co.kr">https://kbsi.recruiter.co.kr</a> (KBSI application site)</li> </ul>				

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## [Job Description for Research Scientist(Full-time) Recruitment for 2025 – 4]

<b>Area of recruitment</b>	<b>Synchrotron Science – X-ray Nanoprobe</b>				
<b>Academic major</b>	<b>Physics, Chemistry, Materials Science, related major.</b>	<b>Job position</b>	<b>Research Scientist</b>	<b>Locations</b>	<b>Ochang, Pohang</b>
<b>NCS category</b>	Main Category	Category		Sub-Category	
<b>NCS category</b>	A separate analysis was performed to prepare the following contents as the NCS has not developed job categories corresponding to the job duties				
<b>KBSI mission</b>	<ul style="list-style-type: none"> <li>□ Conducting R&amp;D on research facilities &amp; equipment and analytical S&amp;T, and joint research and support for promoting basic science, the foundation of the national science and technology development</li> </ul>				
<b>KBSI main functions</b>	<ul style="list-style-type: none"> <li>□ Research support and joint research through the development and operation of cutting-edge large-scale research equipment</li> <li>□ Development of analytical technology and equipment through analytical science research</li> <li>□ In charge of general management of national research facilities and equipment</li> <li>□ Fostering research equipment experts and creative future talent</li> </ul>				
<b>General requirements</b>	Age and gender	Not specified			
<b>Educational requirements</b>	<b>Academic Background</b>	<b>Doctoral degree</b>			
<b>Required job duties</b>	<ul style="list-style-type: none"> <li>□ Experiment and research using spectro-nanoscope using nano-focused hard x-ray beamline</li> <li>□ Development of scanning spectro-nanoscope and ptychography techniques and instrumentation</li> </ul>				
<b>Capacity and ability</b>	<ul style="list-style-type: none"> <li>□ Understanding of various nano-focused hard x-ray experimental techniques</li> <li>□ Capabilities for development and operation of experimental instrumentation and beamline for nano-focused hard x-ray beamline</li> <li>□ Capabilities for collaborate research and international cooperation</li> </ul>				
<b>Required knowledge</b>	<ul style="list-style-type: none"> <li>□ Research/Analytical knowledge related to ptychography and spectro-nanoscope</li> <li>□ Knowledge of instrumentation and beamline for ptychography and spectro-nanoscope</li> </ul>				
<b>Required skills</b>	<ul style="list-style-type: none"> <li>□ Manage and operation of nano-focusing optics and beamline</li> <li>□ Design and operation of nano-positioning instrumentation for spectro-nanoscope</li> <li>□ Knowledge and skill for development and analysis of ptychography and spectro-nanoscope using x-ray detector and CCD</li> </ul>				
<b>Attitude in performing duties</b>	<ul style="list-style-type: none"> <li>□ Proactive, responsible, and diligent attitude to solve a problem</li> <li>□ An exploratory attitude towards new knowledge and skills</li> <li>□ Positive and active communication attitude</li> <li>□ Efforts oriented towards teamwork</li> </ul>				
<b>Reference websites</b>	<ul style="list-style-type: none"> <li>□ <a href="http://www.ncs.go.kr">www.ncs.go.kr</a> (except for the undeveloped jobs in NCS)</li> <li>- The above job description was prepared through a separate analysis.</li> <li>□ <a href="http://www.kbsi.re.kr">http://www.kbsi.re.kr</a> (KBSI website)</li> <li>□ <a href="https://kbsi.recruiter.co.kr">https://kbsi.recruiter.co.kr</a> (KBSI application site)</li> </ul>				

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