

[Job Description for Research Scientist(Full-time) Recruitment for 2025 – 1]

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|--------------------------------------|--|------------------------|---------------------------|------------------|----------------|
| Area of recruitment | Analytical Science on Cutting-Edge Materials(secondary batteries, nano-catalyst materials, etc.) | | | | |
| Academic major | Physics, Chemistry, Chemical Engineering, Materials Engineering, Energy Materials, and related majors | Job position | Research Scientist | Locations | Daejeon |
| NCS category | Main Category | Category | | Sub-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"> □ Conducting R&D on research facilities & equipment and analytical S&T, and joint research and support for promoting basic science, the foundation of the national science and technology development | | | | |
| KBSI main functions | <ul style="list-style-type: none"> □ Research support and joint research through the development and operation of cutting-edge large-scale research equipment □ Development of analytical technology and equipment through analytical science research □ In charge of general management of national research facilities and equipment □ Fostering research equipment experts and creative future talent | | | | |
| General requirements | Age and gender | Not specified | | | |
| Educational requirements | Academic Background | Doctoral degree | | | |
| Required job duties | <ul style="list-style-type: none"> □ Joint research and R&D on secondary batteries and nano-catalyst materials □ Material property analysis research using advanced analysis research equipment □ Domestic and international joint research □ Planning of R&D projects related to the above fields, etc.D | | | | |
| Capacity and ability | <ul style="list-style-type: none"> □ Advanced analysis and property research in the field of cutting-edge strategic materials (secondary batteries, nano catalysts, etc.) □ Cutting-edge strategic material characteristic research and related research planning using analytical science | | | | |
| Required knowledge | <ul style="list-style-type: none"> □ Specialized knowledge related to properties and analysis science of secondary batteries and nano-catalyst materials □ Specialized knowledge in the field of properties of advanced strategic materials (secondary batteries, nano-catalyst materials, etc.) | | | | |
| Required skills | <ul style="list-style-type: none"> □ Secondary battery, nano-catalyst material properties and analysis science utilization technology □ Cutting-edge strategic material (secondary battery, nano-catalyst material, etc.) property utilization technology | | | | |
| Attitude in performing duties | <ul style="list-style-type: none"> □ Proactive, responsible, and diligent attitude to solve a problem □ An exploratory attitude towards new knowledge and skills □ Positive and active communication attitude □ Efforts oriented towards teamwork | | | | |
| Reference websites | <ul style="list-style-type: none"> □ www.ncs.go.kr (except for the undeveloped jobs in NCS) - The above job description was prepared through a separate analysis. □ http://www.kbsi.re.kr (KBSI website) □ https://kbsi.recruiter.co.kr (KBSI application site) | | | | |

※ The above duties are the main duties that the applicant will perform upon employment after being selected as the successful applicant, and the applicant may perform duties other than the main job duties and the place of work may also be changed.

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

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

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【Job Description for Research Scientist(Full-time) Recruitment for 2025 – 3】

| | | | | | |
|-------------------------------|--|------------------------|--------------------|--------------|----------------|
| Area of recruitment | Synchrotron accelerator development – Vacuum | | | | |
| Academic major | Mechanical Engineering, Physics, Chemistry, Electrical Engineering, related major | Job position | Research Scientist | Locations | Ochang, Pohang |
| NCS category | Main Category | Category | | Sub-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"> □ Conducting R&D on research facilities & equipment and analytical S&T, and joint research and support for promoting basic science, the foundation of the national science and technology development | | | | |
| KBSI main functions | <ul style="list-style-type: none"> □ Research support and joint research through the development and operation of cutting-edge large-scale research equipment □ Development of analytical technology and equipment through analytical science research □ In charge of general management of national research facilities and equipment □ Fostering research equipment experts and creative future talent | | | | |
| General requirements | Age and gender | Not specified | | | |
| Educational requirements | Academic Background | Doctoral degree | | | |
| Required job duties | <ul style="list-style-type: none"> □ Management of vacuum-related tasks □ Integrated design of vacuum systems for Korea-4GSR (layout planning and simulation) □ Characteristic analysis of ultra-high vacuum device (pumps, leak detectors, RGA, sensors) □ Design of fabrication techniques for ultra-high vacuum chamber | | | | |
| Capacity and ability | <ul style="list-style-type: none"> □ Understanding vacuum characteristics of synchrotron accelerator and beamline PTL) □ To design systems using 2D/3D CAD and 3D □ Structural and thermal analysis using ANSYS. □ Vacuum-related simulations (Molflow+, Synrad, etc.). □ To interpret mechanical design drawings. | | | | |
| Required knowledge | <ul style="list-style-type: none"> □ Gas behavior in (ultra) high vacuum (continuum and particle-based) □ Mechanical and structural analysis □ Basic knowledge of electromagnetics, control engineering, and photon optics □ Preferred Majors: Mechanical Engineering, Physics □ Other Applicable Majors: Chemistry, Electrical Engineering, Electronics and software | | | | |
| Required skills | <ul style="list-style-type: none"> □ Proficiency in simulation codes □ Ability to use CAD/CAM □ Basic knowledge of hardware/software for control applications | | | | |
| Attitude in performing duties | <ul style="list-style-type: none"> □ Accurate work processing attitude and efficient work performance ability □ Proactive, responsible, and diligent attitude to solve a problem □ An exploratory attitude towards new knowledge and skills □ Positive and active communication attitude □ Efforts oriented towards teamwork | | | | |
| Reference websites | <ul style="list-style-type: none"> □ www.ncs.go.kr (except for the undeveloped jobs in NCS) - The above job description was prepared through a separate analysis. □ http://www.kbsi.re.kr (KBSI website) □ https://kbsi.recruiter.co.kr (KBSI application site) | | | | |

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【Job Description for Research Scientist(Full-time) Recruitment for 2025 – 4】

| Area of recruitment | Synchrotron X-ray Science – Bio Small Angle X-ray Scattering | | | | |
|-------------------------------|--|-----------------|--------------------|--------------|----------------|
| Academic major | Bio-Science, Chemistry, Physics and related majors | Job position | Research Scientist | Locations | Ochang, Pohang |
| NCS category | Main Category | Category | | Sub-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"> □ Conducting R&D on research facilities & equipment and analytical S&T, and joint research and support for promoting basic science, the foundation of the national science and technology development | | | | |
| KBSI main functions | <ul style="list-style-type: none"> □ Research support and joint research through the development and operation of cutting-edge large-scale research equipment □ Development of analytical technology and equipment through analytical science research □ In charge of general management of national research facilities and equipment □ Fostering research equipment experts and creative future talent | | | | |
| General requirements | Age and gender | Not specified | | | |
| Educational requirements | Academic Background | Doctoral degree | | | |
| Required job duties | <ul style="list-style-type: none"> □ Research and development of Bio-SAXS analysis methodology □ Development of Bio-SAXS beamline and instrumentation (Korea-4GSR construction project) □ Research and Development utilizing with Bio-SAXS in synchrotron facility | | | | |
| Capacity and ability | <ul style="list-style-type: none"> □ Ability and understanding of Bio-SAXS techniques in synchrotron facility □ Ability for development and operation of Bio-SAXS beamline and end-station □ Ability for collaborative R&D and international collaboration | | | | |
| Required knowledge | <ul style="list-style-type: none"> □ Theoretical/Analytical knowledge of Bio-SAXS measurement □ Experimental system and methodology of solution SAXS technique. □ Instrumentation and automation for Bio-SAXS end-station | | | | |
| Required skills | <ul style="list-style-type: none"> □ Data acquisition and analysis for Bio-SAXS experiment □ Application and utilization of automation and robotics technology for Bio-SAXS □ Management of hard x-ray beamline, chamber, 2D detector for Bio-SAXS | | | | |
| Attitude in performing duties | <ul style="list-style-type: none"> □ Proactive, responsible, and diligent attitude to solve a problem □ An exploratory attitude towards new knowledge and skills □ Positive and active communication attitude □ Efforts oriented towards teamwork | | | | |
| Reference websites | <ul style="list-style-type: none"> □ www.ncs.go.kr (except for the undeveloped jobs in NCS) - The above job description was prepared through a separate analysis. □ http://www.kbsi.re.kr (KBSI website) □ https://kbsi.recruiter.co.kr (KBSI application site) | | | | |

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【Job Description for Research Scientist(Full-time) Recruitment for 2025 – 5】

| Area of recruitment | Synchrotron X-ray Science – Soft X-ray Nanoscopy | | | | |
|-------------------------------|---|------------------------|--------------------|--------------|----------------|
| Academic major | Physics, Chemistry, Material Science and related majors | Job position | Research Scientist | Locations | Ochang, Pohang |
| NCS category | Main Category | Category | | Sub-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"> □ Conducting R&D on research facilities & equipment and analytical S&T, and joint research and support for promoting basic science, the foundation of the national science and technology development | | | | |
| KBSI main functions | <ul style="list-style-type: none"> □ Research support and joint research through the development and operation of cutting-edge large-scale research equipment □ Development of analytical technology and equipment through analytical science research □ In charge of general management of national research facilities and equipment □ Fostering research equipment experts and creative future talent | | | | |
| General requirements | Age and gender | Not specified | | | |
| Educational requirements | Academic Background | Doctoral degree | | | |
| Required job duties | <ul style="list-style-type: none"> □ Research and development of soft x-ray spectroscopy technique □ Development of Soft x-ray nanoscopy beamline and instrumentation (Korea-4GSR construction project) □ Application research utilizing with soft x-ray nanoscopy in synchrotron facility | | | | |
| Capacity and ability | <ul style="list-style-type: none"> □ Ability and understanding of soft x-ray spectroscopy techniques in synchrotron facility □ Ability for development and operation of soft x-ray beamline and end-station □ Ability for collaborative R&D and international collaboration | | | | |
| Required knowledge | <ul style="list-style-type: none"> □ Knowledge of soft x-ray beamline and focusing optics □ Experimental system and methodology of soft x-ray spectroscopy technique. □ Vacuum instrumentation and detector for soft x-ray spectroscopy. | | | | |
| Required skills | <ul style="list-style-type: none"> □ Data acquisition and analysis for soft x-ray spectroscopy measurement. □ Device for sample transfer, positioning and temperature control □ Vacuum chamber and system and spectrometer for soft x-ray spectroscopy | | | | |
| Attitude in performing duties | <ul style="list-style-type: none"> □ Proactive, responsible, and diligent attitude to solve a problem □ An exploratory attitude towards new knowledge and skills □ Positive and active communication attitude □ Efforts oriented towards teamwork | | | | |
| Reference websites | <ul style="list-style-type: none"> □ www.ncs.go.kr (except for the undeveloped jobs in NCS) <li style="padding-left: 20px;">- The above job description was prepared through a separate analysis. □ http://www.kbsi.re.kr (KBSI website) □ https://kbsi.recruiter.co.kr (KBSI application site) | | | | |

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