

※ This announcement is for foreigners who have difficulty using Korean.

As a government-funded research institution, Korea Research Institute of Standards and Science (KRISS) performs research involving basic and original technology in all areas of science and technology. Based on the National Competency Standards associated with blind recruitment, it now calls for competent scientists from various areas who are encouraged to pursue their dream and passion at KRISS.

□ Area for Employment

Field		Assigned task	Personnel	Code
Physical Metrology	Impedance Standard	• Development of Polyharmonic distortion (PHD) model (X-parameter)	1	A01
Chemical and Biological Metrology	바이오물질량 (YS사업)	Only Koreans can apply	1	B01
	바이오진단분석 (YS사업)	Only Koreans can apply	1	B02
	Radioactivity Metrology	• Development of matrix certificated reference material • Development of proficiency testing for the dissemination • Calibration and test of the HPGe detector at KHNP	1	B03
	미생물분석표준 (YS사업)	Only Koreans can apply	1	B04
	Metrology for Inorganic Analysis	• Metal purity analysis • Isotope ratio measurement of inorganic elements	1	B05
	Organic Metrology	• Development of mass spectrometric method for multi-component analysis of food contaminants and residual pesticides and drugs • Development of certified reference material for analysis of hazardous materials • Purity assay of primary reference material for food contaminants and pesticides	1	B06
Advanced Instrumentation	Semiconductor Metrology1	• Research and development of thin film and nano-pattern optical metrology based on polarization measurement	2	C01
	Semiconductor Metrology2	• 2D material synthesis research for the development of electronics • Development of 2D material based sensor (strain, gas, pressure)	1	C02
	Development of Advanced Scientific Instruments	• Instrumentation of advanced electron microscopes and performance evaluation • Development and Applications of electron monochromator and spectrometers	1	C03

Field	Assigned task	Personnel	Code	
Quantum Technology	GHG metrology1	• Gas phase chemical dynamics of atmospheric relevant molecules using pump-probe spectroscopy	1	C04
	GHG metrology2	• Stable isotope ratio analysis using Isotope Ratio Mass Spectrometer	1	C05
	GHG metrology3	• Measurement of trace level halogenated GHGs using precon-GC-MSD	1	C06
	Atomic-scale Measurement	• Research on 2D materials/strongly correlated electron systems using computer codes based on DFT(+DMFT) method • DFT(+DMFT)-based methodology/code development	1	C07
	Space Optics	• Optical metrology for space optics • Development of novel testing method for surface error of large mirror	1	C08
	Optical Imaging and Metrology	• Opto-mechanical assembly and alignment • Optical inspection equipment for semiconductor and displays	1	C09
	Quantum Information	• Development of quantum sensing and metrological technology for precise measurement using quantum light • Development of efficient and precise quantum measurement methodology	1	D01
	Superconducting quantum computing system1	• Hamiltonian engineering for controlling superconducting qubits • Noise analysis of superconducting qubits • Investigation of quantum gates and quantum algorithms	1	D02
	Superconducting quantum computing system2	• Hardware for Superconducting Quantum Computer • Development of Metrology for Control and Measurement of Quantum State	2	D03
Quantum Spin1	• Design and build a magneto-optical imaging system • Magnetic Image Measurement and Analysis • Micromagnetic simulation	2	D04	
Quantum Spin2	• Electronic structure of quantum materials with ARPES and XPS • Spin structure with SEMPA • Development of k-IPES and spin-polarized electron source • Micromagnetic simulation	2	D05	
Quantum Spin3	• Spintronics device design and fabrication using sputtering/lithography • Analysis of spintronics device property	1	D06	
Hybrid Quantum Systems	• Research and development of microwave-to-optical quantum transduction technology by integrating superconducting quantum circuits, nanophotonic circuits and nano-opto-electromechanical systems	1	D07	

	Field	Assigned task	Personnel	Code
Interdisciplinary Materials Measurement	Hyperspectral Nano-imaging	<ul style="list-style-type: none"> <li>Diagnosing microplastic by developing spectroscopic nano-imaging</li> <li>Analyzing nanoscale carrier dynamics of low-dimensional material and device by developing time-resolved spectroscopic nano-imaging</li> </ul>	1	E01
	Smart devices1	<ul style="list-style-type: none"> <li>Collection and AI utilization of materials research data</li> <li>Data-driven new materials design and development</li> </ul>	1	E02
	Smart devices2	<ul style="list-style-type: none"> <li>Development of materials and devices for thermoelectric cooling</li> <li>Development of a smart device with built-in cooling modules</li> </ul>	1	E03
	Smart devices3	<ul style="list-style-type: none"> <li>Development of energy material and measurement based on electrochemistry (thermoelectric materials, water-splitting electrocatalysts, LIBs )</li> </ul>	1	E04
	스마트소자4 (YS사업)	Only Koreans can apply	1	E05
	저차원소자물질 연구 (YS사업)	Only Koreans can apply	1	E06
	IoT Optical Sensor	<ul style="list-style-type: none"> <li>Development of multi-functional infrared imaging sensors</li> <li>Development of epitaxy technology for mid-infrared light emitting diodes</li> </ul>	2	E07
	Operando Methodology and Measurement1	<ul style="list-style-type: none"> <li>XRD-Raman based Li-ion battery and display material/device measurement</li> <li>In-situ, operando measurement</li> <li>Machine learning based data analysis</li> </ul>	1	E08
	Operando Methodology and Measurement2	<ul style="list-style-type: none"> <li>Performance evaluation and material data collection (crystallographic &amp; electrochemical data) for cathode and solid electrolyte of lithium ion battery</li> <li>R&amp;D for materials of lithium ion battery</li> </ul>	1	E09
	Operando Methodology and Measurement3	<ul style="list-style-type: none"> <li>Next generation materials for flexible optoelectronics and semiconductor device</li> <li>Flexible electronics (OLED, OPV, OTFT, optical transistors, neuromorphic device)</li> </ul>	1	E10
	AI Metamaterial	<ul style="list-style-type: none"> <li>Fundamentals and Applications of AI</li> <li>AI-based system diagnosis technique</li> </ul>	1	E11
Safety Measurement	Structural Safety Monitoring	<ul style="list-style-type: none"> <li>Applying AI networks to structural safety monitoring</li> <li>Signal processing, modelling for mechanical wave(acoustic, vibration, ultrasound)</li> <li>Developing advanced technology for structural safety with meta-material</li> </ul>	1	F01
	Bioimaging1	<ul style="list-style-type: none"> <li>Developments of optical imaging technologies for bio and medical fields (optical coherence tomography, nonlinear optical microscopy, photoacoustic imaging, etc.)</li> <li>Developments of image processing and analysis technologies for biomedical photonics fields</li> </ul>	1	F02

	Field	Assigned task	Personnel	Code
R&D Policy and Technology Services	Bioimaging2	<ul style="list-style-type: none"> <li>Developments of optical microscopy technologies (Digital holographic microscopy, dark-field microscopy, hyperspectral microscopy, Light sheet microscopy etc.)</li> <li>Developments of drug screening instrument based on organoid and nanomaterials distribution analysis technologies in cells and tissues for nano-safety</li> </ul>	1	F03
	Bioimaging3	<ul style="list-style-type: none"> <li>Research on cellular toxicology of nanomaterials (nanoparticles, nanofibers)</li> <li>Research on pathological mechanisms based on bioimaging</li> </ul>	1	F04
	Material Compatibility to Hydrogen Facility1	<ul style="list-style-type: none"> <li>Thermal-mechanical fatigue test</li> <li>Material property data system construction</li> </ul>	1	F05
	Material Compatibility to Hydrogen Facility2	<ul style="list-style-type: none"> <li>Development of Metrology for Hydrogen Permeation Properties of Polymers for Hydrogen Infrastructures</li> <li>Development of Hydrogen-permeation Barrier Coating Using ALD/CVD</li> </ul>	1	F06
	Material Compatibility to Hydrogen Facility3	<ul style="list-style-type: none"> <li>Evaluation and analysis of hydrogen embrittlement of new alloy steel under high pressure hydrogen environment</li> <li>Evaluation and analysis of fracture characteristics of new alloy steel under high pressure hydrogen environment</li> <li>Maintenance and related fixture design for airtightness of the evaluation system</li> </ul>	1	F07
	Nanosafety1	<ul style="list-style-type: none"> <li>Development of Metrology for physicochemical characteristic of nanomaterials</li> </ul>	1	F08
	Nanosafety2	<ul style="list-style-type: none"> <li>Development of nanomaterial safety measurement technology using three-dimensional cell culture method</li> </ul>	1	F09
	Nanosafety3	<ul style="list-style-type: none"> <li>Development of artificial organ model (organoid)-based nanomaterial toxicity and safety measurement system</li> </ul>	1	F10
	Environmental Radioactivity	<ul style="list-style-type: none"> <li>Radioactivity analysis and measurement</li> <li>Development of reference material for environmental radioactivity</li> </ul>	1	F11
	의료측정1 (YS사업)	Only Koreans can apply	1	F12
	Medical Metrology	<ul style="list-style-type: none"> <li>Development of microfluidic system for diagnostic and therapeutic applications</li> </ul>	1	F13
	National Center for Standard Reference Data	<ul style="list-style-type: none"> <li>A Study on Data Reliability for National Reference Standard System Operation <ul style="list-style-type: none"> <li>Data traceability and uncertainty</li> <li>Data Reliability</li> </ul> </li> </ul>	1	G01

※ Candidates can only apply in one of the recruitment fields, and if overlapping or cross-applications are confirmed, admission is cancelled.

**Eligibility**

Classification	Description
Post-doc.	<ul style="list-style-type: none"> <li>○ Eligibility requirements                             <ul style="list-style-type: none"> <li>- Those who do not fall under the reasons for disqualification for appointment                                     <ul style="list-style-type: none"> <li>· Those who have not suspended or deprived voting rights by law</li> <li>· Those who have not evaded military service obligations</li> <li>· Those who have not been caught for fraudulent employment</li> <li>· Those who have not been dismissed due to misconduct</li> <li>· Those without reasons for disqualification for overseas travel</li> </ul> </li> <li>- Those who earned their Ph.D. within the past 5 years or will earn their Ph.D. within the next 3 months as of the scheduled date of employment</li> </ul> </li> <li>○ Preferential treatment                             <ul style="list-style-type: none"> <li>- Those of national merit, those eligible for employment support, those with a disability and Women in science and technology are eligible for preferential treatment if they submit evidentiary documents</li> </ul> </li> </ul>

**How to apply**

- Online application for the KRISS job page (<https://kriss.recruiter.co.kr/>)
- Period for submission: May 11th, 2022 (Wed) ~ May 25th, 2022 (Wed), 13:00
  - ※ Korean time(GMT+9)

**Process**

Process	Description
1st screening (Document)	<ul style="list-style-type: none"> <li>○ Evaluation of expertise and competence in each area for employment                             <ul style="list-style-type: none"> <li>- Evaluation items: performance, experience, capability, and competence</li> <li>- Criteria for passing: Each applicant will be evaluated with a five-point scale in comprehensive consideration of evaluation items. Applicants who earn high scores among those who earn at least 80 points on average based on the aggregate points granted by each evaluator.</li> </ul> </li> </ul>
Online personality test	Koreans only
2nd screening (interview)	<ul style="list-style-type: none"> <li>○ Research performance seminar and personality interview                             <ul style="list-style-type: none"> <li>- Evaluation items: basic attitude, thinking ability, presentation ability, potential, knowledge</li> <li>- Criteria for passing: Applicants who earn high scores among those who earn at least 80 points on average based on the aggregate points granted by each evaluator.</li> </ul> </li> </ul>

※ Applicants who reside overseas may have a video interview in the 2nd screening.

**Required documents**

Classification	Description
Application form	<ul style="list-style-type: none"> <li>○ Self-introduction, experience statement, article and patent performance list, etc.</li> <li>※ Fill out through the online job posting website</li> </ul>
2nd screening	<ul style="list-style-type: none"> <li>○ Presentation materials of research performance seminar</li> </ul>
After 2nd screening	<ul style="list-style-type: none"> <li>○ Transcripts/certificates of graduation of all university/graduate school programs</li> <li>○ Proof of career/employment, copies of certificates of qualifications, certificate of military service (if applicable)</li> <li>○ Proof of research achievements(paper, patent) written in the application form</li> <li>○ Certificate of disability, certificate of eligibility for employment protection (if applicable)</li> </ul>

**Timeline**

Process	Date	Remarks
Employment notice	May 11th ~ May 25th, 2022	Timeline subject to change due to the institution's circumstances
Receipt of application forms	May 11th ~ May 25th, 2022	
1st screening	Late May, 2022	
2nd screening	Mid June, 2022	
Announcement of successful applicants of 2nd screening	Late June, 2022	
Scheduled date of employment	July 1st, 2022	

**Training conditions**

Classification	Description
Term of contract	<ul style="list-style-type: none"> <li>○ Contract within one year</li> <li>※ Training is possible until the end of the project in the 5th year after obtaining the maximum doctoral degree.</li> <li>※ If the result of training evaluation is insufficient, the training period cannot exceed 3 years.</li> </ul>
Working conditions	<ul style="list-style-type: none"> <li>○ Wage: To be determined through career grading applicable to regular employees based on the institution's own evaluation criteria</li> </ul>

**Other information**

- Failure to comply with the blind recruitment requirements during screening may result in penalties such as deductions.

- Do not write prejudice factors such as age, gender, and graduation school in the self-introduction letter (however, you can fill out prejudice factors if requested directly on the application form.)
- If it is unavoidable to write a prejudice factors in the self-introduction letter, write it as follows.  
※ Ex: OO University or University A

- No one may be employed if no applicant is found qualified after the screening process
- Candidates are responsible for any disadvantages due to omission of documents to be submitted or false entry or submission
- Acceptance and appointment may be canceled if fraudulent behavior or false entry in the application form is found during the screening process.
- If you have any questions, contact the recruitment site Q&A.
  - Email: sinaeyu@kriss.re.kr