

※ 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.

## ☐ Areas for Employment

Field		Assigned task	Personnel	Code
Physical Metrology	5G/6G electromagnetic measurement technique (YS')	Only Koreans can apply	1	A01
	Primary Optical Radiometry Standard	<ul style="list-style-type: none"> <li>• Development of optical radiometry standard</li> <li>• Operation of mechanically-cooled cryogenic electrical substitution radiometer</li> </ul>	1	A02
	Quantum Electricity Metrology	<ul style="list-style-type: none"> <li>• Fabrication of epitaxial graphene-based quantum Hall device</li> <li>• Precision characterization of Hall quantization in graphene device</li> </ul>	1	A03
Chemical and Biological Metrology	Microbiological Analysis (YS')	Only Koreans can apply	1	B01
	Advanced Organic Analysis 1 (YS')	Only Koreans can apply	1	B02
	Advanced Organic Analysis 2 (YS')	Only Koreans can apply	1	B03
	Advanced Organic Analysis 3	<ul style="list-style-type: none"> <li>• Development of mass spectrometric method for multi-component analysis of food contaminants and residual pesticides and drugs</li> <li>• Development of certified reference material for analysis of hazardous materials</li> <li>• Purity assay of primary reference material for food contaminants and pesticides</li> </ul>	1	B04
	Biological Science	<ul style="list-style-type: none"> <li>• Analysis of DNA damage response signaling</li> <li>• Evaluation of cytotoxicity and genotoxicity</li> <li>• Analysis of DNA damage and repair</li> <li>• Review of bio-analytical technologies</li> </ul>	1	B05
	Metrology for Inorganic analysis	<ul style="list-style-type: none"> <li>• metal purity analysis</li> <li>• isotope ratio measurement of inorganic elements</li> </ul>	1	B06
	Biomolecular measurement 1 (YS')	Only Koreans can apply	1	B07

Field		Assigned task	Personnel	Code
	Biomolecular measurement 2	<ul style="list-style-type: none"> <li>• Development of DNA and RNA measurement methods</li> <li>• Development of nucleic acid CRMs for diagnosis</li> </ul>	1	B08
	Biomolecular measurement 3	<ul style="list-style-type: none"> <li>• Development of nucleic acid CRMs</li> <li>• Establishment of the new technology for quality control of advanced therapies</li> </ul>	1	B09
	Dosimetry	<ul style="list-style-type: none"> <li>• Development of DAQ communication programs for dosimetry systems</li> <li>• Calculating MeV-energy electron transport using the Monte Carlo method</li> </ul>	1	B10
Advanced Instrumentation	Semiconductor Integrated Metrology 1	<ul style="list-style-type: none"> <li>• Research and development of thin film and nano-pattern optical metrology based on polarization measurement</li> </ul>	2	C01
	Semiconductor Integrated Metrology 2	<ul style="list-style-type: none"> <li>• 2D material synthesis research for the development of electronics</li> <li>• Development of 2D material based sensor (strain, gas, pressure)</li> </ul>	1	C02
	Semiconductor Integrated Metrology 3	<ul style="list-style-type: none"> <li>• Development of semiconductor parts test platform</li> <li>• Development of semiconductor process real-time monitoring sensor</li> </ul>	1	C03
	GHG metrology 1	<ul style="list-style-type: none"> <li>• Quantitative mass spectrometry for trace GHGs analysis (WMO IG3IS project)</li> </ul>	1	C04
	GHG metrology 2	<ul style="list-style-type: none"> <li>• Computed Tomography - Optical Emission Spectroscopy (CT-OES) for wide plasma diagnosis in semiconductor-display process</li> </ul>	1	C05
	Atomic-scale measurement	<ul style="list-style-type: none"> <li>• Research on 2D materials/strongly correlated electron systems using computer codes based on DFT(+DMFT) method</li> <li>• DFT(+DMFT)-based methodology/code development</li> </ul>	1	C06
	Optical Imaging and Metrology	<ul style="list-style-type: none"> <li>• Optical inspection equipment for semiconductor and displays</li> </ul>	1	C07
	Advanced Scientific Instrumentation (YS*)	Only Koreans can apply	1	C08
Quantum Technology	Quantum Spin 1	<ul style="list-style-type: none"> <li>• Design and build a magneto-optical imaging system</li> <li>• Magnetic Image Measurement and Analysis</li> <li>• Micromagnetic simulation</li> </ul>	1	D01
	Quantum Spin 2	<ul style="list-style-type: none"> <li>• Spin structure with SEMPA</li> </ul>	1	D02
	Quantum Spin 3 (YS*)	Only Koreans can apply	1	D03
	Quantum Optics	<ul style="list-style-type: none"> <li>• Participation in the development of quantum light sources for quantum communication and networking</li> <li>• Composition and characterization of free-space and optical-fiber setups for quantum optics experiments</li> <li>• Visiting research for Korea-US (UIUC) joint research project</li> </ul>	2	D04

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
	AI Metamaterial	<ul style="list-style-type: none"> <li>• Fundamentals and Applications of AI</li> <li>• AI-based system diagnosis technique</li> </ul>	1	E02
	In-operando analysis (YS*)	Only Koreans can apply	1	E03
	Smart devices 1 (YS*)	Only Koreans can apply	1	E04
	Smart devices 2	• Development of Metrology for Scanning Electrochemical Microscopy (Analysis of water-splitting electrocatalysts and LIB electrodes)	1	E05
	Smart devices 3	<ul style="list-style-type: none"> <li>• Data-driven new materials design and development</li> <li>• AI utilization of materials research data</li> </ul>	1	E06
	Smart devices 4	<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	E07
	Smart devices 5	<ul style="list-style-type: none"> <li>• Evaluation and characterizations of materials (cathode and solid electrolyte) for next-generation rechargeable batteries</li> <li>• Developments of performance evaluation protocols and database of advanced battery materials</li> </ul>	1	E08
	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	E09
	Low-dimensional quantum materials	<ul style="list-style-type: none"> <li>• High-precision measurement technology for low-dimensional quantum materials</li> <li>• Develop new functional quantum devices with low-dimensional quantum materials</li> </ul>	1	E10
	Frontier of Extreme Physics (YS*)	Only Koreans can apply	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
	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	F02
	Medical Metrology	• Development of microfluidic system for diagnostic and therapeutic applications	1	F03

Field		Assigned task	Personnel	Code
	Nanosafety 1	• Development of Metrology for physicochemical characteristic of nanomaterials	1	F04
	Nanosafety 2	• Development of nanomaterial safety measurement technology using three-dimensional cell culture method	1	F05
	Bioimaging 1 (YS*)	Only Koreans can apply	1	F06
	Bioimaging 2	• Developments of optical imaging technologies for bio and medical fields (optical coherence tomography, nonlinear optical microscopy, photoacoustic imaging, etc.) • Developments of image processing and analysis technologies for biomedical photonics fields	1	F07
	Bioimaging 3	• Developments of optical microscopy technologies (Digital holographic microscopy, dark-field microscopy, hyperspectral microscopy, Light sheet microscopy etc.) • Developments of drug screening instrument based on organoid and nanomaterials distribution analysis technologies in cells and tissues for nano-safety	1	F08
	Bioimaging 4 (YS*)	Only Koreans can apply	1	F09
	Hydrogen Compatible Materials 1	• Analysis of microstructural evolution for alloy steels • Analysis of correlation between mechanical properties and microstructure • Analysis of hydrogen embrittlement mechanisms	1	F10
	Hydrogen Compatible Materials 2	• Thermal-mechanical fatigue test • Material property data system construction	1	F11
	Hydrogen Compatible Materials 3	• Development of Metrology for Material Properties of Polymers for Hydrogen Infrastructures • Development of Metrology for Evaluation of Hydrogen Compatibility of Polymers • Development of Hydrogen-permeation Standard Material Using ALD/CVD	1	F12
R&D Policy and Technology Services	National Center for Standard Reference Data 1	• A study on data reliability for the operation of the national standard reference data system – Data traceability and uncertainty – Evaluation on data reliability	1	G01
	National Center for Standard Reference Data 2	• A study on the policy and strategy for the operation of the national standard reference data system – Mid to long-term development strategy for national standard reference data – Strategy for the advancement of system on discovery/nurturing/operating data center	1	G02
Policy and Strategy	Strategy of the Quantum Technology	• Investigative analysis research of quantum technology, etc. • Supporting the operation of the Quantum National Technology Strategy Center, etc.	1	H01

Field	Assigned task	Personnel	Code
Superconducting Quantum Computing System 1	<ul style="list-style-type: none"> <li>• Hardware for Superconducting Quantum Computer</li> <li>• Development of Metrology for Control and Measurement of Quantum State</li> </ul>	2	I01
Superconducting Quantum Computing System 2	<ul style="list-style-type: none"> <li>• Hamiltonian engineering for controlling superconducting qubits</li> <li>• Noise analysis of superconducting qubits</li> <li>• Investigation of quantum gates and quantum algorithms</li> <li>• Development of softwares for controlling quantum computers</li> </ul>	2	I02

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

※ Only Koreans can apply for [YS Fields](#).

## ☐ Eligibility

Classifi- cation	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 on the KRISS job page (<https://kriss.recruiter.co.kr/>)
- Period for submission: Oct. 14th, 2022 (Fri) ~ Oct. 29th, 2022 (Sat), 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	Oct. 14th ~ Oct. 29th, 2022	Timeline subject to change due to the institution's circumstances
Receipt of application forms	Oct. 14th ~ Oct. 29th, 2022	
1st screening	Early Nov., 2022	
2nd screening	Mid Nov., 2022	
Announcement of successful applicants of 2nd screening	Late Nov. ~ Early Dec., 2022	
Scheduled date of employment	Dec. 15th, 2022	

## ☐ Training conditions

Classification	Description
Term of contract	<ul style="list-style-type: none"><li>○ Contract within one year<ul style="list-style-type: none"><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></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 (You can fill out prejudice factors if requested directly on the application form though.)
  - 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