

※ 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	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	A01
	Atom-based Quantum Standards	<ul style="list-style-type: none"> <li>Development of Yb optical lattice clocks</li> <li>Absolute frequency measurement and comparison of Yb optical lattice clocks</li> <li>Probing a new clock transition line in Yb</li> </ul>	1	A02
	Atom-based Quantum Measurement1	<ul style="list-style-type: none"> <li>A Study on the Control of Cooling Atoms Using Laser</li> <li>A Study on the measurement of Gravity and Acceleration Using Atomic Interferometer</li> </ul>	1	A03
	Atom-based Quantum Measurement2	<ul style="list-style-type: none"> <li>Vapor cell atomic frequency standard for satellite navigation system</li> <li>Precision measurement based on microfabricated vapor cells</li> </ul>	1	A04
	Electromagnetic Wave Metrology (YS*)	Only Koreans can apply	1	A05
Chemical and Biological Metrology	Biomolecular Measurement	<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	B01
	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	B02
	Gas metrology	<ul style="list-style-type: none"> <li>Development of semiconductor/industrial gas analysis technology</li> <li>Building gas analysis systems</li> <li>Analysis data processing and interpretation</li> </ul>	1	B03
	Advanced Organic Analysis (YS*)	Only Koreans can apply	1	B04
Advanced Instrumentation	Atomic-scale measurement1	<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	C01
	Atomic-scale measurement2	<ul style="list-style-type: none"> <li>Microscopic study of low-dimensional materials based on Scanning probe microscopy(SPM)</li> <li>Microscopic study of nanoscale thermal transport based on time-resolved pump-probe optical spectroscopy</li> </ul>	1	C02

Field		Assigned Task	Personnel	Code
	Atomic-scale measurement3 (YS')	Only Koreans can apply	1	C03
	GHG metrology1	• Gas phase reaction dynamics of atmospheric relevant molecules using time-resolved spectroscopy	1	C04
	GHG metrology2	• Ambient halogenated GHGs analysis using Preconcentrator-GC-MS (WMO IG3IS project)	1	C05
	GHG metrology3	• Computed Tomography - Optical Emission Spectroscopy (CT-OES) for optical diagnosis of carbon-net-zero type semiconductor display process	1	C06
	GHG metrology4	• Development of Metrology for Greenhouse gas analysis • Analysis of trace species in the gas mixture	1	C07
	Semiconductor Metrology	• Research and development of thin film and nano-pattern optical metrology based on polarization measurement	2	C08
	Optical Imaging and Metrology	• Development of 3D measurement technique for complex freeform surfaces	1	C09
Quantum Technology	Quantum Spin1	• Design and build a magneto-optical imaging system • Magnetic Image Measurement and Analysis • Micromagnetic simulation	1	D01
	Quantum Spin2	• Spintronics device design and fabrication using sputtering/lithography • Analysis of spintronics device property	1	D02
	Quantum Computing	• development of neutral atom qubit measurement and control technology for quantum computation • development of neutral atom qubit based quantum computation	2	D03
	Hybrid Quantum Systems (YS')	Only Koreans can apply	1	D04
	Quantum Optics	• Development of quantum sensing and metrological technology for precise measurement using quantum light • Development of efficient and precise quantum measurement methodology	1	D05
Interdisciplinary Materials Measurement	Intelligent Wave Engineering	• Fundamentals and Applications of AI • AI-based system evaluation and diagnosis technique	1	E01
	Smart Device1	• Development of reference cathode materials and their performance evaluation protocols • Research for interface property of composite cathodes in all solid-state battery	1	E02
	Smart Device2	• Research on thermoelectric nanomaterials using MEMS devices • Growth of nano- and thin-film materials (CVD)	1	E03
	Smart Device3	• Development of a thermoelectric measurement system at room temperature and below	1	E04
	Smart Device4	• Development of energy materials and unit cell measurement technology (Energy material : anode-free battery, water electrolysis catalyst)	1	E05

Field		Assigned Task	Personnel	Code
	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	E06
	Multiscale Mechanical Properties Measurement	<ul style="list-style-type: none"> <li>• Measurement of mechanical and electromechanical properties of low-dimensional nanomaterials using In-situ SEM nanomechanics</li> <li>• Development of low-dimensional nanomaterials based electromagnetic interference (EMI) shielding films</li> </ul>	1	E07
Safety Measurement	Material Compatibility to Hydrogen Facility1	<ul style="list-style-type: none"> <li>• Analysis of microstructural evolution for alloy steels</li> <li>• Analysis of correlation between mechanical properties and microstructure</li> <li>• Analysis of hydrogen embrittlement mechanisms</li> </ul>	1	F01
	Material Compatibility to Hydrogen Facility2	<ul style="list-style-type: none"> <li>• Thermal-mechanical fatigue test</li> <li>• Material property data system construction</li> </ul>	1	F02
	Material Compatibility to Hydrogen Facility3	<ul style="list-style-type: none"> <li>• Development of Metrology for Material Properties of Polymers for Hydrogen Infrastructures</li> <li>• Development of Metrology for Evaluation of Hydrogen Compatibility of Polymers</li> <li>• Development of Hydrogen-permeation Standard Material Using ALD/CVD</li> </ul>	1	F03
	Bioimaging	<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 optical microscopy technologies and analysis technologies in cells and tissues</li> </ul>	1	F04
	Nanosafety	<ul style="list-style-type: none"> <li>• Development of In vitro approaches to assess the hazard of nanomaterials</li> </ul>	2	F05
Superconducting Quantum Computing System 1		<ul style="list-style-type: none"> <li>• Design, fabrication and characterization of superconducting transmon qubit</li> <li>• Hardware components for superconducting quantum computer</li> <li>• Development of control and measurement technology for superconducting qubit</li> </ul>	1	G01
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>	1	G02
National Center for Standard Reference Data		<ul style="list-style-type: none"> <li>• A study on data reliability for the operation of national system on standard reference data <ul style="list-style-type: none"> <li>– traceability and uncertainty</li> <li>– Evaluation on data reliability</li> <li>– Data science, AI using standard reference data</li> </ul> </li> </ul>	1	H01

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

## ☐ 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 disabilities 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.recruitment.kr>)
- Period for submission: 7th Mar. 2023 (Tue) ~ 22nd Mar. 2023 (Wed), 13:00
  - ※ Korean time(UTC+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, competence, etc.</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>
Before 2nd screening	<ul style="list-style-type: none"> <li>○ Presentation materials for 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 research achievements(paper, patent, etc.) written in application form</li> <li>○ Proof of career/employment, copies of certificates of qualifications, certificate of military service (if applicable)</li> <li>○ Certificate of disability, certificate of eligibility for employment protection (if applicable)</li> <li>※ Documents submitted after 2<sup>nd</sup> screening are not provided to evaluators.</li> </ul>

## ☐ Timeline

Process	Date	Remarks
Employment notice	7th Mar. ~ 22nd Mar., 2023	Timeline is a subject to change due to the institution's circumstances.
Receipt of application forms	7th Mar. ~ 22nd Mar., 2023	
1st screening	Late Mar., 2023	
2nd screening	Mid Apr., 2023	
Announcement of successful applicants of 2nd screening	Late Apr., 2023	
Scheduled date of employment	15th May, 2023	

## ☐ 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 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 and gender—in the self-introduction letter. (You can fill out prejudice factors if requested directly on the application form though.)

- 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/submission.
- Acceptance and appointment may be canceled if fraudulent behavior or false entry in the application form is found during the screening process.
- KRISS can require the name of university/graduate school which applicant graduated, information on research laboratory, and professor's name who was academic advisor of applicant.
- If you have any questions, contact the recruitment site Q&A.
  - Email: [dmjung@kriss.re.kr](mailto:dmjung@kriss.re.kr)