※ 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	Atom-based Quantum Sensors	• Designing a miniature low power consumption Sr optical clock • Developing a portable laser system for Sr atom cooling and quantum state control	1	A01
	Atom-based Quantum Standards	• Development of Yb optical lattice clocks • Absolute frequency measurment and comparison of Yb optical lattice clocks • Probing a new clock transition line in Yb	1	A02
	Mechanical Metrology1	• Development of a precision weighing system for the semiconductor fabrication • Development of micro force and torque measurement technology	1	A03
	Mechanical Metrology2	• Development of tactile sensing technologies	2	A04
Chemical and Biological Metrology	Biomolecular measurement1	• Development of nucleic acid CRMs • Establishment of the new technology for quality control of advanced therapies	1	B01
	Biomolecular measurement2	• Development of DNA and RNA measurement methods • Development of nucleic acid CRMs for diagnosis	1	B02
	Biological Science	• Analysis of DNA damage response signaling • Evaluation of cytotoxicity and genotoxicity • Analysis of DNA damage and repair • Review of bio-analytical technologies	1	B03
	Metrology for Inorganic analysis	• metal purity analysis • isotope ratio measurement of inorganic elements	1	B04
	Microbial analysis	• Development of pathogen measurement and universal infectious disease diagnosis technology using antigen-antibody interactions • Recombinant protein production, protein purification and analysis	1	B05
	Gas isotope metrology	• Development of metrology for atomic weights and SI traceable gas standards of isotope ratio • Development of mesurement standards for green house gas and hydrogen gas standards	1	B06

Field		Assigned Task	Personnel	Code
	Gas metrology	• Development of semiconductor/industrial gas analysis technology • Building gas analysis systems • Analysis data processing and interpretation	1	B07
	Dosimetry	• Development of DAQ communication programs for dosimetry systems • Calculating MeV-energy electron transport using the Monte Carlo method	1	B08
Advanced Instrumentation	Semiconductor Metrology	• Research and development of thin film and nano-pattern optical metrology based on polarization measurement	2	C01
	Atomic-scale measurement1	• Research on 2D materials/strongly correlated electron systems using computer codes based on DFT(+DMFT) method • DFT(+DMFT)-based methodology/code development	1	C02
	Atomic-scale measurement2	• Development of low temperature RF STM • Study for atomic scale dynamics of semiconductors and vdW materials	1	C03
	GHG metrology1	• Gas phase reaction dynamics of atmospheric relavent 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 wide plasma diagnosis in semiconductor·display process	1	C06
	Measurement Instrument Data Verification	• Research on Greenhouse Gas Measurement Instrument Data Verification and Data Quality Management Software for Applications in Agriculture, Ecology, and Environment	1	C07
Quantum Technology	Quantum Spin1	• Design and build a magneto-optical imaging system • Magnetic Image Measurement and Analysis • Micromagnetic simulation	1	D01
	Quantum Spin2	• Electronic structure of quantum materials with ARPES and XPS • Spin structure with SEMPA	2	D02
	Quantum Spin3	• Spintronics device design and fabrication using sputtering/lithography • Analysis of spintronics device property	1	D03
	Quantum Optics1	• Participation in the development of quantum light sources for quantum communication and networking • Free-space and optical-fiber setups for quantum information processing experiments • Participation in inter-institutional and international collaborations	2	D04
	Quantum Optics2	• Photon-pair generation based on 2D materials • Measurement of 3rd order nonlinearity of 2D materials	1	D05
Interdisciplinary Materials Measurement	Hyperspectral Nano-imaging Lab	• Developing hyper-spectral near-field imaging in liquid phase • Analyzing nanoscale optical/electrical/chemical properties of novel nano-composite material /device	1	E01

Field		Assigned Task	Personnel	Code
	Smart devices1	• Developments of advanced electrode/electrolyte materials and their characterization platforms for next-generation rechargeble batteries • Developments of global standardization of evaluation protocols for litium ion and post lithium ion batteries	1	E02
	Smart devices2	• Development of electrocatalyst and cell system for AEMWE(Anion Exchange Membrane Water Electrolysis)	1	E03
	Smart devices3	• Development of Metrology for Scanning Electrochemical Microscopy (Analysis of water-splitting electrocatalysts and LIB electrodes)	1	E04
	Smart devices4	• Data-driven new materials design and development • AI utilization of materials research data	1	E05
	Smart devices5	• Development of organic/inorganic electrode materials and evaluation technique for Li-ion battery • Development of measurement protocol for organic redox flow battery	1	E06
	Smart devices6	• Development of materials and devices for thermoelectric cooling • Development of a thermoelelctirc measurement system below room temperature	1	E07
Safety Measurement	Material Compatibility to Hydrogen Facility1	• Analysis of microstructual evolution for alloy steels • Analysis of correlation between mechanical properties and microstructure • Analysis of hydrogen embrittlement mechanisms	1	F01
	Material Compatibility to Hydrogen Facility2	• Thermal-mechanical fatigue test • Material property data system construction	1	F02
	Material Compatibility to Hydrogen Facility3	• 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	F03
	Nanosafety1	• Development of Metrology for physicochemical characteristic of nanomaterials	1	F04
	Nanosafety2	• Development of nanomaterial safety measurement technology using three-dimensional cell culture method	1	F05
	Photonics Technology for Facility Safety	• Development of photonic(fiber optic) sensing and application technologies for matrix cracks, delamination, and stiffness degradation of composite materials	1	F06
	Bioimaging1	• Developments of optical microscopy technologies (Digital holographic microscopy, dark-field microscopy, hyperspectral microscopy, light-sheet microscopy etc.) • Developments of optical microscopy technologies and analysis technologies in cells and tissues	1	F07
	Bioimaging2	• Development of quantitative analysis for surface mass spectrometry • Development of sample pre-treatment and application of quantification method for clinical specimens	1	F08

Field	Assigned Task	Personnel	Code
Superconducting Quantum Computing System 1	• Design, fabrication and characterization of superconducting transmon qubit • Hardware components for superconducting quantum computer • Development of control and measurement technology for superconducting qubit	2	G01
Superconducting Quantum Computing System 2	• Hamiltonian engineering for controlling superconducting qubits • Noise analysis of superconducting qubits • Investigation of quantum gates and quantum algorithms • Development of softwares for controlling quantum computers	2	G02

※ 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.	○ Eligibility requirements - Those who do not fall under the reasons for disqualification for appointment · Those who have not suspended or deprived voting rights by law · Those who have not evaded military service obligations · Those who have not been caught for fraudulent employment · Those who have not been dismissed due to misconduct · Those without reasons for disqualification for overseas travel - 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 ○ Preferential treatment - 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.

□ How to apply

○ Online application on the KRISS job page (https://kriss.recruiter.co.kr/)

○ Period for submission: 10th Jan. 2023 (Tue) ~ 25th Jan. 2023 (Wed), 13:00

※ Korean time(GMT+9)

□ Process

Process	Description
1st screening (Document)	○ Evaluation of expertise and competence in each area for employment - Evaluation items: performance, experience, capability, competence, etc. - 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.
Online personality test	Koreans only
2nd screening (Interview)	○ Research performance seminar and personality interview - Evaluation items: basic attitude, thinking ability, presentation ability, potential, knowledge - 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.

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

□ Required documents

Classification	Description
Application form	○ Self-introduction, experience statement, article and patent performance list, etc. ※ Fill out through the online job posting website.
Before 2nd screening	○ Presentation materials for research performance seminar
After 2nd screening	○ Transcripts/certificates of graduation of all university/graduate school programs ○ Proof of research achievements(paper, patent, etc.) written in application form ○ Proof of career/employment, copies of certificates of qualifications, certificate of military service (if applicable) ○ Certificate of disability, certificate of eligibility for employment protection (if applicable) ※ Documents submitted after 2nd screening are not provided to evaluators.

□ Timeline

Process	Date	Remarks
Employment notice	10th Jan. ~ 25th Jan., 2023	Timeline is a subject to change due to the institution's circumstances.
Receipt of application forms	10th Jan. ~ 25th Jan., 2023	
1st screening	Early Feb., 2023	
2nd screening	Mid Feb., 2023	
Announcement of successful applicants of 2nd screening	Early Mar., 2023	
Scheduled date of employment	15th, Mar. 2023	

□ Training conditions

Classification	Description
Term of contract	○ Contract within one year ※ Training is possible until the end of the project in the 5th year after obtaining the maximum doctoral degree. ※ If the result of training evaluation is insufficient, the training period cannot exceed 3 years.
Working conditions	○ Wage: To be determined through career grading applicable to regular employees based on the institution's own evaluation criteria

□ 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 name of schools you graduated—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 prejudice factors in the self-introduction letter, write them 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/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