

## Job Posting (for Postdoctoral Researcher)

Affiliation	<b>Earth-Life Science Institute (ELSI)</b>
Position title	Researcher
Number of Openings	1
Area of Specialization	<p>Computational geochemistry and thermodynamic modeling with application to planetary science. Candidates with experience in Gibbs free energy minimization, thermodynamic database development, coupled geochemical and thermal evolution modeling, or reaction-transport are particularly encouraged to apply. Familiarity with tools such as Perple_X, CALPHAD, GEMS, PHREEQC, PFLOTRAN, molecular dynamics simulations (e.g. GROMACS) or equivalent platforms is an advantage.</p>
Job Description	<p>The laboratory of Associate Professor Mohit Melwani Daswani at the Earth-Life Science Institute (ELSI) seeks a motivated postdoctoral researcher to develop and apply thermodynamic models of organic matter stability and water–rock–organic interactions in planetary interiors. The group's research focuses on ocean worlds (including icy moons of the outer solar system and carbon-rich dwarf planets) as well as rocky planetary bodies, and aims to constrain habitability conditions over geological timescales.</p> <p>The researcher will construct and extend thermodynamic databases for organic compounds, including polycyclic aromatic hydrocarbons and related astrochemically relevant species, and will apply computational numerical models (e.g., Gibbs free energy minimization to model phase equilibria and reaction energetics) under relevant pressure–temperature conditions. A central component of the role is integrating experimentally measured thermodynamic properties (heat capacity functions, decomposition enthalpies, and phase boundaries produced by the lab's calorimetry program) into modeling workflows, so that predictions and experiments are tightly coupled. Alternatively, or in combination, the researcher may develop reactive transport models of water–rock and water–rock–organic interactions with applications to ocean world geochemistry, small bodies, early Mars paleoclimate, exoplanets, or related systems.</p> <p>The researcher will collaborate closely with an experimental postdoctoral researcher in the same group, and should be comfortable translating between measured quantities and model inputs, contributing to experimental design from a modeling perspective, and co-authoring publications across both experimental and computational themes. Researchers with backgrounds in geochemistry, planetary science, physical chemistry, or closely related fields are welcome to apply.</p>

	Communication at ELSI is conducted in English. Full support for research activities in Japan is provided for international appointees.
Qualifications	Candidates should hold a doctoral degree (Ph.D. or equivalent).
Location	Ookayama Campus Nearest station: Ookayama
Working Hours	De facto working hours* under the discretionary labor system: 7 hours 45 minutes per day (38 hours 45 minutes per week) *Hours considered as working hours
Term	1 year from date of hire. (The contract may be extended). The employment period is subject to Article 7 of the Institute's Employment Regulations for Fixed-Term Staff.
Probationary Period	14 days (The probationary period is subject to Article 12 of the Institute's Employment Regulations for Fixed-Term Staff.)
Salary	Annual salary (annual base salary) (Monthly salary) ¥353,000 - ¥550,000, depending on experience. The applicant's salary will be determined in accordance with the Institute's Employment Regulations for Fixed-Term Staff.
Social insurance and other benefits	Employee's pension, MEXT Mutual Aid Association short term benefits (health insurance), employment insurance, worker's compensation Insurance
Employer	President and Chief Executive Officer of the National University Corporation Institute of Science Tokyo
Proposed Start Date	The earliest possible date thereafter
Closing Date for Application	Applications must be received by 5 pm, June 15 <sup>th</sup> , 2026 JST. Applications will be reviewed on an ongoing basis. This job posting will close if a successful candidate is finalized, even if before the posted deadline.
Selection Process	Reviewing the submitted materials and selected candidates will be interviewed on-line or in-person. Travel expenses for attending in-person interviews will not be reimbursed.
Required Documents	Please prepare the following materials in PDF format. There is no set format. All documents must be provided in English. Please clearly state "Applying for Modeler" in your documents, as the Melwani Lab is currently recruiting for two different positions. 1. Curriculum vitae including educational background, professional experience, honors, and awards, mailing address, and e-mail address. 2. List of research achievements classified into the following categories (a: peer-reviewed journal papers, b: presentations in international conferences, c: books, d: Education experiences, and others). Please indicate publications in which you are the first author with an asterisk (*). Please highlight up to three most important papers. 3. Up to 2 reprints of major original papers. 4. List of acquired external research grants, fellowships, or competitive funds. The type, project title, period of research, and budget should be provided for each item. Please specify applicant's contribution as a principal or cooperative

	<p>investigator. In case where you act as co-investigator, please specify the total and allocated budgets.</p> <p>5. Research achievements and plans for research at ELSI (any format, about 2 pages of A4 paper)</p> <p>6. List of names and contact information of two references. The name, affiliation, e-mail address, and their relationship to the applicant should be provided.</p>
How to Submit an application	<p>Please combine all specified documents into a single PDF file and upload it to the Box URL below by 5:00 PM on June 15th, 2026 (JST).  <a href="https://science-tokyo.app.box.com/f/973046e7413a4de1a1974fe4edb22331">https://science-tokyo.app.box.com/f/973046e7413a4de1a1974fe4edb22331</a>  Please clearly state "Applying for Modeler" in your documents.</p>
Contacts	<p>Please address questions to Mohit Melwani Daswani, Associate Professor  E-mail: melwani [at]elsi.jp (replace [at] by @)</p>
Other	<ol style="list-style-type: none"> <li>1. During the selection process, candidates may be requested to provide additional information.</li> <li>2. Application documents will not be returned. The personal information provided in the submitted documents will be used solely for recruitment and not for any other purpose, pursuant to the Institute's applicable rules and regulations.</li> <li>3. The Institute, in order to ensure a diverse workforce, guarantees equal opportunities for all individuals regardless of nationality or gender.</li> <li>4. Smoking is prohibited on campus except in designated areas.</li> <li>5. Questions regarding the applicability of the "Specific Categories" under the Foreign Exchange and Foreign Trade Act may be asked during the selection process.</li> <li>6. For more information, please refer to the following link.  <a href="https://www.jinji2.jim.titech.ac.jp/koubo/en/">https://www.jinji2.jim.titech.ac.jp/koubo/en/</a></li> </ol>