**SACLA Proposal Application Template**

**(Urgent Proposal)**

**This proposal application template can be used to draft your proposal application details and then copy and paste them into the online application.**

**Please submit your proposals using the format that is normally used for General Proposal.**

**Please do not check the box below for the Urgent Proposal.**

|  |  |
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| Complementary Use of SPring-8, SACLA, J-PARC MLF or Supercomputers (public computational resource of HPCI including the K computer) | □Yes |

**[PAGE 1: Basic Information]**

1. Title of Experiment <required> (70 word limit)

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2. Research Area and Research Method

2-1-1. Research Area <required>

- Main Area: Please choose a Main Research Area. <required>

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| Main Research Area |  |
| Select from the following <required> |
| □ | AMO (Atom, Molecular & Optical Science) |
| □ | BIO (Biology) |
| □ | CHM (Chemistry) |
| □ | HEDS (High Energy Density Science) |
| □ | IND (Industrial Applications) |
| □ | MAT (Materials Science) |
| □ | MI (Methods & Instrumentations) |
| □ | XOP (X-ray Optics) |
| □ | Others |

2-1-2. Main Research Area Keywords (30 word limit)

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2-1-3 Related Area:

-Please put a check, if there are the related areas in addition to a Main Research Area.

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| Related Research Areas |  |
| Multiple Choice Allowed |
| □ | AMO (Atom, Molecular & Optical Science) |
| □ | BIO (Biology) |
| □ | CHM (Chemistry) |
| □ | HEDS (High Energy Density Science) |
| □ | IND (Industrial Applications) |
| □ | MAT (Materials Science) |
| □ | MI (Methods & Instrumentations) |
| □ | XOP (X-ray Optics) |
| □ | Others |

2-1-4. Related Research Area Keywords (30 word limit)

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2-2-1. Main Research Method

- Please choose a main research method. <required>

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| Method |  |
| Select from the following <required> |
| □ | XIM (X-ray Imaging)  □Please put a check in case of CDI (Coherent Diffractive Imaging) |
| □ | XSC (X-ray Scattering) |
| □ | XSP (X-ray Spectroscopy)  - If you choose XSP, please put a check into one of the following.  □ X-ray Detection  □ Charged Particle Detection |
| □ | XRD (X-ray Diffraction)  □ Please put a check in case of SFX (Serial Femtosecond Crystallography)  □ Please put a check in case of FPX (Fixed-target Protein Crystallography) |
| □ | Others |

2-2-2. Main Research Method Keywords (30 word limit)

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2-2-3. Related Research Methods

- Please put a check, if there are the related research methods in addition to a main Research method.

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| Method |  |
| Multiple Choice Allowed |
| □ | XIM (X-ray Imaging)  □ Please put a check in case of CDI (Coherent Diffractive Imaging) |
| □ | XSC (X-ray Scattering) |
| □ | XSP (X-ray Spectroscopy)  - If you choose XSP, please put a check into one of the following.  □ X-ray Detection  □ Charged Particle Detection |
| □ | XRD (X-ray Diffraction)  □ Please put a check in case of SFX (Serial Femtosecond Crystallography)  □ Please put a check in case of FPX (Fixed-target Protein Crystallography) |
| □ | Others |

2-2-4. Related Research Method Keywords (30 word limit)

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3. Beamline (hutch) to be used <required>

- Click [here](http://xfel.riken.jp/users/index.html) to see an overview of each hutch.

- The beamline to conduct the experiment will be determined after the Proposal Review in discussion with the beamline staff of SACLA.

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| (Check one) | Beamline (Hutch) | |
| □ | BL1 (EH4a) | SXFEL |
| □ | BL2 (EH3&4b) | XFEL |
| □ | BL2 (EH6) | XFEL |
| □ | BL3 (EH2) | XFEL |
| □ | BL3 (EH4c) | XFEL |
| □ | BL3 (EH5) | XFEL |

4. Number of Shifts Requested [1 shift is 12 hours] <required>

- Explain how you estimated the number of requested shifts in the space provided for #17: Details of requested shifts.

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5．Feasibility Check Beamtime (FCBT)

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| □ | Request FCBT in addition to the main beamtime. |

- For details, please refer to the [the Call for Proposals](https://user.spring8.or.jp/s/sacla-cfp-e).

6. Unavailable Dates (50 word limit)  
- Period covered: September 2020 – March 2021

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- Please note that we may not be able to fulfill your request.

- Please also check your collaborators’ schedule.

- Please describe the reason if total “Unavailable Dates” are over 30 days.

**[PAGE 2: Project Team Members]**

7. Project Team Members: User Card Number, Name, and Affiliation

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| --- | --- | --- |
| User Card ID Number | Name | Institution/Company |
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- Project team members as well as project leaders are required to complete user registrations in advance. If your team members have chosen "Do not allow" for their account settings in the User Registration page, their user card numbers are not displayed in search results and you cannot find them; therefore, all users are strongly encouraged to choose "Allow." If necessary, please ask your team members to change their account settings (Log in to My Page > “Edit My Details” link in the top right hand corner). The account settings can be changed even after proposals are approved for beamtime.

- If you are affiliated with an institution outside Japan, please have at least one local contact person that is affiliated with a Japanese institution participate in your experiment. If you cannot find one, please contact the Users Office ([sacla.jasri@spring8.or.jp](mailto:sacla.jasri@spring8.or.jp)).

**[PAGE 3: Known Safety Hazards & Measures to Be Taken]**

8. Does your proposed research involve any of the following? <required>

-If yes, you will be required to submit [additional forms](https://user.spring8.or.jp/s/documents-sacla-e) with your proposal application.

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| (Check all that apply.) | Check Item |
| □ | High pressure gas cylinder from the outside of SPring-8/SACLA |
| □ | Radioisotope |
| □ | Radiation generator: installation, modification, change of purpose or specifications |
| □ | Internationally controlled materials (nuclear source/fuel materials) |
| □ | Installation of devices/equipment regulated by law:  - High-pressure gas manufacturing plant  - Local ventilation/gas supply and exhaust system  - Crane |
| □ | Chemicals regulated by law:  - Specific substances regulated by the "Act on the Prohibition of Chemical Weapons and Control of Specific Chemicals"  - Specified poisonous substances regulated by the "Poisonous and Deleterious Substances Control Law"  - Substances for which manufacturing is prohibited, asbestos, etc. under the "Industrial Safety and Health Law"  - Narcotics, stimulant drugs, hemp (gum), opium, and their raw materials, psychotropic drugs, and no dangerous substances of 1/5 or more in quantity specified by the "Fire Service Act" |
| □ | Invasive alien species |
| □ | Specified risk materials (SRM) from cattle |
| □ | Prohibited imports regulated by the "Plant Protection Act" |
| □ | Recombinant DNA |
| □ | Human materials |
| □ | High-energy laser system (Class 4, Class 3B and Class 3R lasers specified by IEC 60825-1 standard) from the outside of SPring-8/SACLA |
| □ | Live animals (mammals, birds, or reptiles) |
| □ | Specific biological samples/biohazards (agents of biological origin that have the capacity to cause ill-effects in other organisms)  - pathogenic microbes (incl. infectious nucleic acids, plasmids, prions), parasites, and the toxic substances, carcinogens, and allergens produced by them that can cause harm to humans, livestock, and farm/marine products. |
| □ | N/A |

9. Details of samples (Including substances prepared by SPring-8/SACLA as well as carry-in samples)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of Substance\*1 | State/Figure\*2 | Qty & Unit (SI)\*3 | Hazards\*4 | Purpose of Use\*5 | Containment measure and disposal method | Prevention of Hazards | Risk Level\*6 | Remarks |
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\*1 Avoid abbreviations.

\*2 Capillary (powder), Cylinder (gas), Plate (crystal), metal foil, tablet, bulk, etc.

\*3 SI Unit.

\*4 Categorize the hazard of your sample as Poisonous Substances, Deleterious Substances, Specified Chemical Substances, Organic Solvents, Flammable/Explosive Substances, etc. These categories are based on Japanese legal regulations. You can refer the category and properties of your sample via links described in Section “Procedures to be followed in advance by principal investigators” in the following page.

(<http://www.spring8.or.jp/en/users/safety/form_procedure/chemistry#a-2>)

\*5 Measurement sample, Cleanser, Coolant, Tranquillizer, etc.

\*6 Risk assessment result. For details, see the following page (<https://user.spring8.or.jp/s/risk-assessment-e>). Choose “N/A” for chemical substances which are exempt from the regulation.

**[PAGE 4: Abstract]**

10. Abstract <required> (1200 word limit)

- Describe the background, purpose, significance, originality and expected results of the proposed research, and the consistency with these review criteria, which will be used to review the scientific validity of the proposed research. Please also be sure to provide the necessity of using SACLA as a research tool, and urgency and public significance as an Urgent Proposal.

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11. Provide the expected future developments and direction of the proposed research.

<required> (270 word limit)

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**[PAGE 5: Experimental Details]**

12. Experimental details (measurement method, layout of experimental equipment, detector, concentration of samples, etc.). It is recommended that a figure (figures) of experimental setup is uploaded as an attachment. <required> (1350 word limit)

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13. Photon energy (Wavelength) / Beam size of focused XFEL (if necessary) / Other parameters.

<required> (135 word limit)

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| Photon energy:  Focal size (2-dimensional focus or 1-dimensional focus):  Special operations and the details:  (Please add/delete items if necessary) |

14.Facility instruments to be used. (90 word limit).   
Please provide the name and the email address of the person who the facility staff should contact about the SACLA High Performance Computer (SACLA HPC). If the contact person already has a SACLA HPC account, please write it down.

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| (ex.) MPCCD-Octal sensor, DAPHNIS  SACLA contact person: name, email address and SACLA HPC account |

15. The synchronized laser systems to be used and their specifications (wavelength, pulse energy, beam size, intensity, time-resolution on pump-probe measurement, etc.). In the case of bringing your own laser systems or using others, please describe the details in the "Specifications".  
  
Those who apply to use the high-power nanosecond laser (> 10 J) should carefully read the relevant terms of use at the [Calls for Proposals](https://xfel.jp/s/cfp-en) page on the SACLA User Information website.

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| Laser System | Beamline (Hutch) | Wavelength |
| Femtosecond laser | BL1 (EH4a)  BL3 (EH2)  BL3 (EH4c) | □ 800nm  □ 400nm  □ 266nm  □ 200nm |
| BL1 (EH4a)  BL3 (EH2) | □ OPA |
| Nanosecond laser | BL1 (EH4a)  BL2 (EH3) | □ 532nm  □ OPO |
| High-power femtosecond laser (> 100 TW) | BL2 (EH6) | □ 800nm |
| High-power nanosecond laser (> 10 J) | BL3 (EH5) | □ 532nm |
| Others | ( ) | ( ) |

Specifications (225 word limit)

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| Pulse energy:  Pulse duration:  Beam size:  Intensity:  Time accuracy of synchronization with XFEL:  Time resolution on pump-probe measurement:  Timing monitor: necessary or unnecessary  Details of other lasers:  Terahertz radiation:  (Please add/delete items if necessary) |

16. Equipment that you will bring to SACLA.

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| Equipment | Specifications\* | Safety measures |
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\* Voltage, Ampere, Pressure, Temperature, etc.

17. Details of requested shifts (Please explain how to estimate the number of shifts). <required> (900 word limit)

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18. Provide the preparation status related to this application proposal. In cases where there are other proposals submitted in this term, describe the relationship with this application proposal. Provide similar experiments carried out at other facilities. <required> (990 word limit)

Notice: If you have proposals performed at SACLA being relevant to this application proposal, please submit a Progress Report.

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**[PAGE 6: Progress Report]**

19. Please describe the following items about the proposals performed at SACLA being relevant to this application proposal (4500 word limit).

■Proposal titles　■Proposal No.　■Date of experiment and shift number

■Description of the experiment, Summary of the results

■Publication status of representative results obtained by using SACLA [Papers (published/in press)]

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Acceptable file formats are JPEG (.jpg/.jpeg), GIF(.gif), PNG (.png) only.

Do not upload files without file extensions. Each image should be no larger than 1MB in file size.

Fig. S1:

Fig. S2:

**[PAGE 7: Attachments]**

22. File Upload (up to 3 files). Acceptable file formats are JPEG (.jpg/.jpeg), GIF(.gif), PNG (.png) only.

Do not upload files without file extensions. Each image should be no larger than 1MB in file size.

Fig. 1:

Fig. 2:

Fig. 3: