SACLA

2019A Performed Proposals

| | SACLI | | - | | | | 1 Shit | ft =12Hours |
|-----|-------------------------|--|-----------------------|---|-------------|---|----------|--------------------|
| S/N | Proposal No. | Performed Proposal Title | Project Leader | Affiliation | Country | Type of Proposal | Beamline | Performed Shift |
| 1 | 2019A8001 | Realization of ultrafast spintronic device using quantum well structure | Masaki Kobayashi | The University of Tokyo | Japan | SACLA General Proposal (Non-proprietary) | BL1 | 7 |
| 2 | 2019A8002 | Ultrafast transient x-ray imaging of non-equilibrium high energy density plasmas | Hiroshi Sawada | University of Nevada Reno | USA | SACLA General Proposal (Non-proprietary) | BL2 | 7 |
| 3 | 2019A8004 | High Throughput and Time-Resolved Crystallography of Radiation Sensitive Metalloenzymes using | Michael Hough | University of Essex | UK | SACLA General Proposal | BL2 | 3 |
| 4 | 2019A8005 | a Laser Activated Photocage Dislocation dynamics and carbon diffusion in steels using femto-second X-ray diffraction | Mitsuharu Yonemura | Nippon Steel Corporation | Japan | (Non-proprietary) SACLA General Proposal | BL3 | 3 |
| | | Signal transduction in Bacteriophytochromes observed by Time-Resolved Serial Femtosecond | | | | (Non-proprietary) SACLA General Proposal | | |
| | 2019A8007- | Crystallography | Marius Schmidt | University of Wisconsin-Milwaukee | USA | (Non-proprietary) SACLA General Proposal | BL2 | 3.5 |
| 6 | 2019A8012 | Exploring wave packet motion of excited molecules by energy-tunable seeded XFEL | Shin-ichi Adachi | High Energy Accelerator Research Organization | Japan | (Non-proprietary) | BL3 | 5 |
| 7 | 2019A8013 | Development of versatile methods for protein structural dynamics analysis using X-ray free electron lasers | Eriko Nango | Kyoto University | Japan | SACLA General Proposal (Non-proprietary) | BL2 | 3 |
| 8 | 2019A8014 ²⁾ | Time-resolved crystallography of ultrafast light driven DNA repair by photolyases | Yoshitaka Bessho | Academia Sinica | Taiwan, ROC | SACLA General Proposal (Non-proprietary) | BL2 | 3.5 |
| 9 | 2019A8015 | Structural dynamics of the G protein-coupled receptor rhodopsin studied by pump probe serial | Gebhard Schertler | Paul Scherrer Institute | Switzerland | SACLA General Proposal | BL2 | 3 |
| 10 | 2019A8016 | femtosecond crystallography. Creation and observation of ultra-high energy density state with ultrahigh intensity laser | Keisuke Shigemori | Osaka University | Japan | (Non-proprietary) SACLA General Proposal | BL2 | 5.333 |
| | | Observation of magnetic-field-induced quantum phase transitions in spin-lattice coupled systems | - | | | (Non-proprietary) SACLA General Proposal | | |
| | 2019A8017 | with coherent x-ray diffraction High-resolution structure of photosystem II in the intermediate state of the oxygen-evolving and | Yasuhiro Matsuda | The University of Tokyo | Japan | (Non-proprietary) SACLA General Proposal | BL2 | 5 |
| 12 | 2019A8019 ¹⁾ | water-splitting reaction using fixed-target protein crystallography | Michihiro Suga | Okayama University | Japan | (Non-proprietary) | BL2 | 5 |
| 13 | 2019A8020 | Development of Holographic Imaging method for Observation of Ultra-high Speed Spin Dynamics | Yuichi Yamasaki | National Institute for Materials Science | Japan | SACLA General Proposal (Non-proprietary) | BL1 | 8 |
| 14 | 2019A8021 | Non-linear X-ray spectroscopy using two-color XFEL beams | Ichiro Inoue | RIKEN | Japan | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 15 | 2019A8023 ¹⁾ | Single Particle Imaging with 100-nm Focused XFEL by Pulsed Coherent X-Ray Solution Scattering | Yoshinori Nishino | Hokkaido University | Japan | SACLA General Proposal | BL2 | 7 |
| 16 | 2019A8024 | Radiation-Damage-Free Imaging of Solid Electrolytes for Solid-State Batteries by Pulsed Coherent | Hisao Yamashige | TOYOTA MOTOR CORPORATION | Japan | (Non-proprietary) SACLA General Proposal | BL2 | 7 |
| | | X-Ray Solution Scattering Direct observation of molecular orbitals dynamics by means of time-resolved electron | - | | | (Non-proprietary) SACLA General Proposal | | |
| | 2019A8026 | spectroscopy using SX-FEL | Tatsuo Gejo | University of Hyogo | Japan | (Non-proprietary) SACLA General Proposal | BL1 | 7 |
| 18 | | Electron-ion coincidence spectroscopy of molecular processes in intense XUV laser fields | Mizuho Fushitani | Nagoya University | Japan | (Non-proprietary) | BL1 | 5.5 |
| 19 | 2019A8030 | Dynamical observation of thermal propagation at surface of materials using time-resolved X-ray thermography | Akio Yoneyama | Hitachi, Ltd. | Japan | SACLA General Proposal (Non-proprietary) | BL3 | 3 |
| 20 | 2019A8032 ¹⁾ | Elucidation of the mechanism of photosystem II water-splitting by structural analysis of the intermediate states using pump-probe serial femtosecond crystallography | Jian-Ren Shen | Okayama University | Japan | SACLA General Proposal (Non-proprietary) | BL2 | 5 |
| 21 | 2019A8034 | Femtosecond X-ray protein nanocrystallography on the chloride pumping mechanis of light-driven transport by a new type of chloride ion pump | Mikako Shirouzu | RIKEN | Japan | SACLA General Proposal (Non-proprietary) | BL2 | 3 |
| 22 | 2019A8035 | Time-resolved serial femtosecond crystallography to reveal dynamical properties of oncogene | Fumi Shima | Kobe University | Japan | SACLA General Proposal | BL2 | 2 |
| | | product H-Ras protein Analysis of multiple structure transformation processes via ringwoodite structure to newly- | | | | (Non-proprietary) SACLA General Proposal | | 2 |
| | 2019A8036 ¹⁾ | discovered dense epsilon structure of olivine under shock compression | Takuo Okuchi | Okayama University Centre National de la Recherche | Japan | (Non-proprietary) SACLA General Proposal | BL3 | |
| 24 | 2019A8037 | Phase contrast imaging of Rayleigh-Taylor Instabilities in dense plasmas | Michel Koenig | Scientifique | France | (Non-proprietary) | BL3 | 2 |
| 25 | 2019A8038 | Crossover between an order-disorder and a coherent, displacive phase transition | Mariano Trigo | SLAC National Accelerator Laboratory | USA | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 26 | 2019A8039 | Tracking photogenerated charge carrier dynamics in photovoltaic Cu2ZnSnS4 by ultra-fast X-ray spectroscopy | Jens Andreasen | Technical University of Denmark | Denmark | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 27 | 2019A8040 | Probing the liquid-liquid transition in supercooled Te | Jerome Hastings | SLAC National Accelerator Laboratory | USA | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 28 | 2019A8042 | Utilizing femtosecond X-ray tools for investigation of dyads with Fe(II) photocatalysts | Matthias Bauer | University of Paderborn | Germany | SACLA General Proposal | BL3 | 5 |
| | 2019A8043 | Real-space collective motion of water molecules based on split-and-delay X-ray speckle visibility | | | USA | (Non-proprietary) SACLA General Proposal | BL3 | 7 |
| _ | | spectroscopy Filming X-ray induced reactions in molecules containing heavy elements by time-resolved ion | Yuya Shinohara | Oak Ridge National Laboratory | | (Non-proprietary) SACLA General Proposal | | |
| 30 | 2019A8045 | momentum multiple coincidence spectroscopy | Hironobu Fukuzawa | Tohoku University | Japan | (Non-proprietary) | BL3 | 5 |
| 31 | 2019A8047 | XFEL-excited ultrafast band dynamics in GaAs studied by near-infrared transient-absorption spectroscopy | Yoshihito Tanaka | University of Hyogo | Japan | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 32 | 2019A8048 | Study on X-ray photoionization dynamics in condensed matter with time-resolved two-color X-ray spectroscopy | Taito Osaka | RIKEN | Japan | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 33 | 2019A8049 | Study on electronic state using resonant two-photon absorption spectroscopy II | Kenji Tamasaku | RIKEN | Japan | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 34 | 2019A8052 | Rapid structure determination system for drug-target proteins using the X-ray free electron laser | So Iwata | RIKEN | Japan | SACLA General Proposal | BL2 | 4 |
| 35 | 2019A8054 | Study of dynamics of correlated electronic decay in nano-plasma by time-resolved soft X-ray | Kiyonobu Nagaya | Kyoto University | Japan | (Non-proprietary) SACLA General Proposal | BL1 | 7 |
| _ | | electron spectroscopy Primary dynamics of transient orbital ordering-lattice correlation in perovskite cobalt oxides | | High Energy Accelerator Research | | (Non-proprietary) SACLA General Proposal | | - |
| 36 | 2019A8055 | revealed by femtosecond time-resolved X-ray diffraction | Ryo Fukaya | Organization | Japan | (Non-proprietary) SACLA General Proposal | BL3 | 5 |
| 37 | 2019A8063 | Signal generation in Bacteriophytochromes studied by Serial Femtosecond Crystallography | Sebastian Westenhoff | University of Gothenburg | Sweden | (Non-proprietary) | BL3 | 5 |
| 38 | 2019A8064 | Unraveling the photoinduced formation of polarons in inorganic and hybrid lead halide perovskite nanocrystals with femtosecond X-ray absorption spectroscopy and anomalous X-ray scattering | Sophie Canton | ELI-ALPS Research Institute | Hungary | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 39 | 2019A8065 | Verification of lattice distortions at the photo-induced insulator-to-metal transition in an exitonic insulator TazNiSes II | Yuya Kubota | Japan Synchrotron Radiation Research Institute | Japan | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 40 | 2019A8067 | Tracing temporal evolutions of the sublattice femtomagnetism in RE-TM : Case of TbFe and | Souliman El Moussaoui | The University of Tokyo | Japan | SACLA General Proposal | BL1 | 9 |
| | 2019A8070 | TbFeCo Kinetics of Carbon-Hydrogen Phase Separation at Conditions Comparable to the Interiors of Icy | Dominik Kraus | Helmholtz-Zentrum Dresden- | Germany | (Non-proprietary) SACLA General Proposal | BL3 | 4 |
| | | Giant Planets | | Rossendorf European Xray Free Electron Laser | - | (Non-proprietary) SACLA General Proposal | | |
| | 2019A8072 | Melting structure of SiO2 and its analogues – kinetics at superheating conditions High resolution and non-damged X-ray structural analysis of the plant-type ferredoxin working at | Thomas Tschentscher | facility, GmbH | Germany | (Non-proprietary) SACLA General Proposal | BL3 | 2 |
| 43 | 2019A8073 | the last step of oxygenic photosynthesis | Genji Kurisu | Osaka University | Japan | (Non-proprietary) | BL2 | 2 |
| 44 | 2019A8074 ¹⁾ | Experimental observation of local lattice distortion in low dimensional inorganic-organic coordination polymers using pump-probe spectroscopy and serial femtosecond crystallography at | James Hohman | Lawrence Berkeley National Laboratory | USA | SACLA General Proposal (Non-proprietary) | BL3 | 3 |
| | | an X-ray Free Electron Laser. Time-resolved serial femtosecond crystallography studies of proton pumping by cytochrome c | | | _ | (Non-proprietary) SACLA General Proposal | | |
| | 2019A8077 | oxidase | Richard Neutze | University of Gothenburg | Sweden | (Non-proprietary) | BL2 | 3 |
| 46 | 2019A8078 | Towards incoherent X-ray imaging with atomic resolution | Taisia Gorkhover | SLAC National Accelerator Laboratory | USA | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 47 | 2019A8079 | The role of multiple core electrons in anomalously strong x-ray nonlinearities | Johann Haber | SLAC National Accelerator Laboratory | USA | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 48 | 2019A8081 | Simultaneous X-ray Spectroscopy and Crystallography of Photosystem II | Junko Yano | Lawrence Berkeley National Laboratory | USA | SACLA General Proposal (Non-proprietary) | BL2 | 5 |
| 49 | 2019A8082 | Ultrafast spectroscopy of valence electrons at atomic scale resolution through nonlinear x-ray | Andreas Galler | European Xray Free Electron Laser | Germany | SACLA General Proposal | BL3 | 5 |
| | | quantum frequency conversion Controlling the lifetime of photoexcited states by dimensional confinement | | facility, GmbH Cornell University | USA | (Non-proprietary) SACLA General Proposal | BL3 | 5 |
| | | Controlling the lifetime of photoexcited states by dimensional confinement | Andrej Singer | | | (Non-proprietary) SACLA General Proposal | | |
| 51 | 2019A8087 | Slater versus Mott Magnetic Dynamics in Sr3Ir2O7 | Mark Dean | Brookhaven National Laboratory | USA | (Non-proprietary) | BL3 | 5 |
| 52 | 2019A8088 | Deciphering the structural basis of antimicrobial resistance (AMR) with non-equilibrium, time- resolved SFX studies of beta-lactamase turnover | Allen Orville | Diamond Light Source, Ltd. | UK | SACLA General Proposal (Non-proprietary) | BL2 | 5 |
| 53 | 2019A8089 | Picosecond dynamics of photoexcitation and phase transformation in compressively strained BiFeO3 | Paul Evans | University of Wisconsin | USA | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 54 | 2019A8091 | Terahertz-Driven Structural Dynamics in Multiferroics | Rohit Prasankumar | Los Alamos National Laboratory | USA | SACLA General Proposal (Non-proprietary) | BL3 | 5 |
| 55 | 2019A8092 ¹⁾ | Direct observation of reorientation dynamics of a plastic crystal with colossal barocaloric effect | Yanna Chen | Northwestern University | USA | SACLA General Proposal | BL3 | 3 |
| | | | | | | (Non-proprietary) SACLA Time-Designated | | |
| 26 | 2019A8800 | Time-resolved structural analysis for development of highly functional tire rubber | Ryo Mashita | Sumitomo Rubber Industries, Ltd. | Japan | Proposal (Proprietary) | BL2 | 2 hours |

¹⁾ SACLA Research Proposals for Complementary Use with SPring-8, J-PARC/MLF or Supercomputers (public computational resource of HPCI including the K computer). ²⁾ Including the feasibility check beamtime (FCBT) of 0.5 shifts in performed shift.