

# Stanford

---

## Takahiro Sato

Staff Scientist, SLAC National Accelerator Laboratory

### Publications

---

#### PUBLICATIONS

- **A simple instrument to find spatiotemporal overlap of optical/X-ray light at free-electron lasers.** *Journal of synchrotron radiation*  
Sato, T., Glownia, J. M., Ware, M. R., Chollet, M., Nelson, S., Zhu, D.  
2019; 26 (Pt 3): 647–52
- **Pump-probe experimental methodology at the Linac Coherent Light Source** *JOURNAL OF SYNCHROTRON RADIATION*  
Glownia, J. M., Gumerlock, K., Lemke, H. T., Sato, T., Zhu, D., Chollet, M.  
2019; 26: 685–91
- **A simple instrument to find spatiotemporal overlap of optical/X-ray light at free-electron lasers** *JOURNAL OF SYNCHROTRON RADIATION*  
Sato, T., Glownia, J. M., Ware, M. R., Chollet, M., Nelson, S., Zhu, D.  
2019; 26: 647–52
- **Pump-probe experimental methodology at the Linac Coherent Light Source.** *Journal of synchrotron radiation*  
Glownia, J. M., Gumerlock, K., Lemke, H. T., Sato, T., Zhu, D., Chollet, M.  
2019; 26 (Pt 3): 685–91
- **Direct observation of picosecond melting and disintegration of metallic nanoparticles.** *Nature communications*  
Ihm, Y. n., Cho, D. H., Sung, D. n., Nam, D. n., Jung, C. n., Sato, T. n., Kim, S. n., Park, J. n., Kim, S. n., Gallagher-Jones, M. n., Kim, Y. n., Xu, R. n., Owada, et al  
2019; 10 (1): 2411
- **Direct Measurement of Anharmonic Decay Channels of a Coherent Phonon.** *Physical review letters*  
Teitelbaum, S. W., Henighan, T., Huang, Y., Liu, H., Jiang, M. P., Zhu, D., Chollet, M., Sato, T., Murray, É. D., Fahy, S., O'Mahony, S., Bailey, T. P., Uher, et al  
2018; 121 (12): 125901
- **Single-shot three-dimensional structure determination of nanocrystals with femtosecond X-ray free-electron laser pulses** *NATURE COMMUNICATIONS*  
Xu, R., Jiang, H., Song, C., Rodriguez, J. A., Huang, Z., Chen, C., Nam, D., Park, J., Gallagher-Jones, M., Kim, S., Kim, S., Suzuki, A., Takayama, et al  
2014; 5: 4061
- **Time-Resolved Coherent Diffraction of Ultrafast Structural Dynamics in a Single Nanowire** *NANO LETTERS*  
Newton, M. C., Sao, M., Fujisawa, Y., Onitsuka, R., Kawaguchi, T., Tokuda, K., Sato, T., Togashi, T., Yabashi, M., Ishikawa, T., Ichitsubo, T., Matsubara, E., Tanaka, et al  
2014; 14 (5): 2413–18
- **Generation of 10(20) Wcm (-2) hard X- ray laser pulses with two-stage reflective focusing system** *NATURE COMMUNICATIONS*  
Mimura, H., Yumoto, H., Matsuyama, S., Koyama, T., Tono, K., Inubushi, Y., Togashi, T., Sato, T., Kim, J., Fukui, R., Sano, Y., Yabashi, M., Ohashi, et al  
2014; 5: 3539
- **Multiple application X-ray imaging chamber for single-shot diffraction experiments with femtosecond X-ray laser pulses** *JOURNAL OF APPLIED CRYSTALLOGRAPHY*  
Song, C., Tono, K., Park, J., Ebisu, T., Kim, S., Shimada, H., Kim, S., Gallagher-Jones, M., Nam, D., Sato, T., Togashi, T., Ogawa, K., Joti, et al  
2014; 47: 188–97
- **Two-colour hard X-ray free-electron laser with wide tunability** *NATURE COMMUNICATIONS*  
Hara, T., Inubushi, Y., Katayama, T., Sato, T., Tanaka, H., Tanaka, T., Togashi, T., Togawa, K., Tono, K., Yabashi, M., Ishikawa, T.  
2013; 4: 2919

- **Femtosecond x-ray absorption spectroscopy with hard x-ray free electron laser** *APPLIED PHYSICS LETTERS*  
Katayama, T., Inubushi, Y., Obara, Y., Sato, T., Togashi, T., Tono, K., Hatsui, T., Kameshima, T., Bhattacharya, A., Ogi, Y., Kurahashi, N., Misawa, K., Suzuki, et al  
2013; 103 (13)
- **Time-interleaved multienergy acceleration for an x-ray free-electron laser facility** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*  
Hara, T., Tamasaku, K., Asaka, T., Inagaki, T., Inubushi, Y., Katayama, T., Kondo, C., Maesaka, H., Matsubara, S., Ohshima, T., Otake, Y., Sakurai, T., Sato, et al  
2013; 16 (8)
- **Double Core-Hole Creation by Sequential Attosecond Photoionization** *PHYSICAL REVIEW LETTERS*  
Tamasaku, K., Nagasono, M., Iwayama, H., Shigemasa, E., Inubushi, Y., Tanaka, T., Tono, K., Togashi, T., Sato, T., Katayama, T., Kameshima, T., Hatsui, T., Yabashi, et al  
2013; 111 (4): 043001
- **Investigation of ablation thresholds of optical materials using 1-mu m-focusing beam at hard X-ray free electron laser** *OPTICS EXPRESS*  
Koyama, T., Yumoto, H., Senba, Y., Tono, K., Sato, T., Togashi, T., Inubushi, Y., Katayama, T., Kim, J., Matsuyama, S., Mimura, H., Yabashi, M., Yamauchi, et al  
2013; 21 (13): 15382–88
- **Beamline mirrors and monochromator for X-ray free electron laser of SACLA**  
Ohashi, H., Yabashi, M., Tono, K., Inubushi, Y., Sato, T., Togashi, T., Senba, Y., Koyama, T., Yumoto, H., Miyokawa, K., Ohsawa, T., Goto, S., Ishikawa, et al  
ELSEVIER SCIENCE BV.2013: 139–42
- **Anomalous signal from S atoms in protein crystallographic data from an X-ray free-electron laser** *ACTA CRYSTALLOGRAPHICA SECTION D-STRUCTURAL BIOLOGY*  
Barends, T. M., Foucar, L., Shoeman, R. L., Bari, S., Epp, S. W., Hartmann, R., Hauser, G., Huth, M., Kieser, C., Lomb, L., Motomura, K., Nagaya, K., Schmidt, et al  
2013; 69: 838–42
- **Time-resolved Bragg coherent X-ray diffraction revealing ultrafast lattice dynamics in nano-thickness crystal layer using X-ray free electron laser** *JOURNAL OF THE CERAMIC SOCIETY OF JAPAN*  
Tanaka, Y., Ito, K., Nakatani, T., Onitsuka, R., Newton, M., Sato, T., Togashi, T., Yabashi, M., Kawaguchi, T., Shimada, K., Tokuda, K., Takahashi, I., Ichitsubo, et al  
2013; 121 (1411): 283–86
- **A Bragg beam splitter for hard x-ray free-electron lasers** *OPTICS EXPRESS*  
Osaka, T., Yabashi, M., Sano, Y., Tono, K., Inubushi, Y., Sato, T., Matsuyama, S., Ishikawa, T., Yamauchi, K.  
2013; 21 (3): 2823–31
- **Thin crystal development and applications for hard x-ray free-electron lasers**  
Osaka, T., Yabashi, M., Sano, Y., Tono, K., Inubushi, Y., Sato, T., Ogawa, K., Matsuyama, S., Ishikawa, T., Yamauchi, K., Khounsary, A., Goto, S., Morawe, et al  
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Focusing of X-ray free-electron laser pulses with reflective optics** *NATURE PHOTONICS*  
Yumoto, H., Mimura, H., Koyama, T., Matsuyama, S., Tono, K., Togashi, T., Inubushi, Y., Sato, T., Tanaka, T., Kimura, T., Yokoyama, H., Kim, J., Sano, et al  
2013; 7 (1): 43–47
- **Development of ultrafast pump and probe experimental system at SACLA**  
Sato, T., Togashi, T., Tono, K., Inubushi, Y., Tomizawa, H., Tanaka, Y., Adachi, S., Nakamura, K., Kodama, R., Yabashi, M., Susini, J., Dumas, P.  
IOP PUBLISHING LTD.2013
- **Determination of the Pulse Duration of an X-Ray Free Electron Laser Using Highly Resolved Single-Shot Spectra** *PHYSICAL REVIEW LETTERS*  
Inubushi, Y., Tono, K., Togashi, T., Sato, T., Hatsui, T., Kameshima, T., Togawa, K., Hara, T., Tanaka, T., Tanaka, H., Ishikawa, T., Yabashi, M.  
2012; 109 (14): 144801
- **A compact X-ray free-electron laser emitting in the sub-angstrom region** *NATURE PHOTONICS*  
Ishikawa, T., Aoyagi, H., Asaka, T., Asano, Y., Azumi, N., Bizen, T., Ego, H., Fukami, K., Fukui, T., Furukawa, Y., Goto, S., Hanaki, H., Hara, et al  
2012; 6 (8): 540–44
- **A photodiode amplifier system for pulse-by-pulse intensity measurement of an x-ray free electron laser** *REVIEW OF SCIENTIFIC INSTRUMENTS*  
Kudo, T., Tono, K., Yabashi, M., Togashi, T., Sato, T., Inubushi, Y., Omodani, M., Kirihara, Y., Matsushita, T., Kobayashi, K., Yamaga, M., Uchiyama, S., Hatsui, et al

2012; 83 (4): 043108

● **Determination of the absolute two-photon ionization cross section of He by an XUV free electron laser *JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS***

Sato, T., Iwasaki, A., Ishibashi, K., Okino, T., Yamanouchi, K., Adachi, J., Yagishita, A., Yazawa, H., Kannari, F., Aoyama, M., Yamakawa, K., Midorikawa, K., Nakano, et al  
2011; 44 (16)

● **Extreme ultraviolet free electron laser seeded with high-order harmonic of Ti:sapphire laser *OPTICS EXPRESS***

Togashi, T., Takahashi, E. J., Midorikawa, K., Aoyama, M., Yamakawa, K., Sato, T., Iwasaki, A., Owada, S., Okino, T., Yamanouchi, K., Kannari, F., Yagishita, A., Nakano, et al  
2011; 19 (1): 317–24

● **Extreme ultraviolet free electron laser seeded by high-order harmonic**

Togashi, T., Takahashi, E. J., Midorikawa, K., Aoyama, M., Yamakawa, K., Sato, T., Iwasaki, A., Owada, S., Okino, T., Yamanouchi, K., Couprie, M. E., Hara, T., Kumagai, et al  
IEEE.2011

● **Characterization of beryllium foils for coherent x-ray applications of synchrotron radiation and XFEL beamlines**

Goto, S., Takahashi, S., Inubushi, Y., Tono, K., Sato, T., Yabashi, M., Morawe, C., Khounsary, A. M., Goto, S.  
SPIE-INT SOC OPTICAL ENGINEERING.2011

● **Dissociative two-photon ionization of N-2 in extreme ultraviolet by intense self-amplified spontaneous emission free electron laser light *APPLIED PHYSICS LETTERS***

Sato, T., Okino, T., Yamanouchi, K., Yagishita, A., Kannari, F., Yamakawa, K., Midorikawa, K., Nakano, H., Yabashi, M., Nagasano, M., Ishikawa, T.  
2008; 92 (15)