

Curriculum Vitae: Eriko Nango

Institute of Multidisciplinary Research for Advanced Materials,
Tohoku University

Nationality: Japan, Year of Birth: 1975



Education

1995-1999 B.Sc. in Chemistry, Tokyo Institute of Technology,
Japan.

1999-2001 M.Sc. in Chemistry, Tokyo Institute of Technology, Japan.

2001-2004 Completed Ph.D. program without dissertation in Chemistry, Tokyo Institute
of Technology, Japan.

Doctoral Degree.

September 30, 2007 Ph.D. in Chemistry with title “ *Structural and dynamical analysis
of the enzymatic reaction of 2-deoxy-scylo-inosose synthase*”, Supervisors: K.

Kakinuma & T. Eguchi, Department of Chemistry, Tokyo Institute of Technology,
Japan.

Research Experience.

2019-2020 Program-Specific Associate Professor, Graduate School of Medicine, Kyoto
University

2019-2019 Assistant Professor, Graduate School of Medicine, Kyoto University

2017-2019 Research Scientist, Imaging Development Team, RIKEN Spring8-Center,
Japan.

2013-2017 Research Scientist, SACLA Science Research Group, RIKEN Spring8-
Center, Japan.

2012-2013 Research Associate Molecular Signaling Research Team, RIKEN Spring8-
Center, Japan.

2010-2012 Research Associate, Life Science Research Infrastructure Group, RIKEN
Spring8-Center, Japan.

2004-2010 Assistant Professor, Department of Chemistry, Tokyo Institute of
Technology, Japan.

Current Appointment.

2020- Professor, Institute of Multidisciplinary Research for Advanced Materials,
Tohoku University

Prizes & Awards.

2019 Grant-in-Aid for Scientific Research on Innovative Areas (KAKENHI)

2019 Shiseido Female Researcher Science Grant.

2019 Kono Yasui Prize, Ochanomizu University, Japan.

2018 Grant-in-Aid for Scientific Research (B) (KAKENHI)

2010 Grant-in-Aid for Young Scientists (C) (KAKENHI)

2001-2004 Research Fellowships for Young Scientists (DC1), Japan Society for the
Promotion of Science.

Selected Publications:

1. Retinal isomerization in bacteriorhodopsin captured by a femtosecond x-ray laser. *Science* **261**, 145-152 (2018)
Nogly, P., Weinert, T., James, D., Carbajo, S., Ozerov, D., Furrer, A., Gashi, D., Borin, V., Skopintsev, P., Jaeger, K., Nass, K., B ath, P., Bosman, R., Koglin, J., Seaberg, M., Lane, T., Kekilli, D., Br unle, S., Tanaka, T., Wu, W., Milne, C., White, T., Barty, A., Weierstall, U., Panneels, V., Nango, E., Iwata, S., Hunter, M., Schapiro, I., Schertler, G., Neutze, R., and Standfuss, J.
2. Nanosecond pump-probe device for time-resolved serial femtosecond crystallography developed at SACLA. *J. Synchrotron Radiat.* **24**, 1086-1091 (2017) Kubo, M., Nango, E.*, Tono, K.*, Kimura, T., Owada, S., Song, C., Mafun e, F., Miyajima, K., Takeda, Y., Kohno, J. Y., Miyauchi, N., Nakane, T., Tanaka, T., Nomura, T., Davidsson, J., Tanaka, R., Murata, M., Kameshima, T., Hatsui, T., Joti, Y., Neutze, R., Yabashi, M. and Iwata, S.
*:corresponding author
3. Light-induced structural changes and the site of O=O bond formation in PSII caught by XFEL. *Nature* **543**, 131–135 (2017)
Suga, M., Akita, F., Sugahara, M., Kubo, M., Nakajima, Y., Nakane, T., Yamashita, K., Umena, Y., Nakabayashi, M., Yamane, T., Nakano, T., Suzuki, M., Masuda, T., Inoue, S., Kimura, T., Nomura, T., Yonekura, S., Yu, L. J., Sakamoto, T., Motomura, T., Chen, J. H., Kato, Y., Noguchi, T., Tono, K., Joti, Y., Kameshima, T., Hatsui, T., Nango, E., Tanaka, R., Naitow, H., Matsuura, Y., Yamashita, A., Yamamoto, M., Nureki, O., Yabashi, M., Ishikawa, T., Iwata, S. and Shen, J. R.
4. A three-dimensional movie of structural changes in bacteriorhodopsin. *Science* **354**, 1552-1557 (2016)
Nango, E., Royant, A., Kubo, M., Nakane, T., Wickstrand, C., Kimura, T., Tanaka, T., Tono, K., Song, C., Tanaka, R., Arima, T., Yamashita, A., Kobayashi, J., Hosaka, T., Mizohata, E., Nogly, P., Sugahara, M., Nam, D., Nomura, T., Shimamura, T., Im, D., Fujiwara, T., Yamanaka, Y., Jeon, B., Nishizawa, T., Oda, K., Fukuda, M., Andersson, R., Bath, P., Dods, R., Davidsson, J., Matsuoka, S., Kawatake, S., Murata, M., Nureki, O., Owada, S., Kameshima, T., Hatsui, T., Joti, Y., Schertler, G., Yabashi, M., Bondar, A. N., Standfuss, J., Neutze, R. and Iwata, S.
5. Taste substance binding elicits conformational change of taste receptor T1r heterodimer extracellular domains. *Sci. Rep.* **6**, 25745 (2016)
Nango, E., Akiyama, S., Maki-Yonekura, S., Ashikawa, Y., Kusakabe, Y., Krayukhina, E., Maruno, T., Uchiyama, S., Nuemket, N., Yonekura, K., Shimizu, M., Atsumi, N., Yasui, N., Hikima, T., Yamamoto, M., Kobayashi, Y. and Yamashita, A.
6. Microcrystal delivery by pulsed liquid droplet for serial femtosecond crystallography. *Acta Crystallogr. D Struct. Biol.* **72**, 520-523 (2016)
Mafune, F., Miyajima, K., Tono, K., Takeda, Y., Kohno, J. Y., Miyauchi, N., Kobayashi, J., Joti, Y., Nango, E., Iwata, S. and Yabashi, M.
7. Diverse application platform for hard X-ray diffraction in SACLA (DAPHNIS): application to serial protein crystallography using an X-ray free-electron laser. *J. Synchrotron Radiat.* **22**, 532-537 (2015)
Tono, K., Nango, E., Sugahara, M., Song, C., Park, J., Tanaka, T., Tanaka, R., Joti, Y., Kameshima, T., Ono, S., Hatsui, T., Mizohata, E., Suzuki, M., Shimamura, T., Tanaka, Y., Iwata, S. and Yabashi, M.

8. Grease matrix as a versatile carrier of proteins for serial crystallography. *Nat. Methods* **12**, 61-63 (2015)
Sugahara, M., Mizohata, E., Nango, E., Suzuki, M., Tanaka, T., Masuda, T., Tanaka, R., Shimamura, T., Tanaka, Y., Suno, C., Ihara, K., Pan, D., Kakinouchi, K., Sugiyama, S., Murata, M., Inoue, T., Tono, K., Song, C., Park, J., Kameshima, T., Hatsui, T., Joti, Y., Yabashi, M. and Iwata, S.
9. Structure of *Thermus thermophilus* homoisocitrate dehydrogenase in complex with a designed inhibitor. *J. Biochem.* **150**, 607-614 (2011)
Nango, E., Yamamoto, T., Kumasaka, T. and Eguchi, T.
10. Crystal structure of 3-isopropylmalate dehydrogenase in complex with NAD(+) and a designed inhibitor. *Bioorg. Med. Chem.* **17**, 7789-7794 (2009)
Nango, E., Yamamoto, T., Kumasaka, T. and Eguchi, T.
11. Structure of 2-deoxy-*scyllo*-inosose synthase, a key enzyme in the biosynthesis of 2-deoxystreptamine-containing aminoglycoside antibiotics, in complex with a mechanism-based inhibitor and NAD⁺. *Proteins* **70**, 517-527 (2008)
Nango, E., Kumasaka, T., Hirayama, T., Tanaka, N. and Eguchi, T.
12. Active site mapping of 2-deoxy-*scyllo*-inosose synthase, the key starter enzyme for the biosynthesis of 2-deoxystreptamine. Mechanism-based inhibition and identification of lysine-141 as the entrapped nucleophile. *J. Org. Chem.* **69**, 593-600 (2004)
Nango, E., Eguchi, T. and Kakinuma, K.
13. An expeditious chemo-enzymatic route from glucose to catechol by the use of 2-deoxy-*scyllo*-inosose synthase. *Tetrahedron Lett* **41**, 1935-1938 (2000)
Kakinuma, K., Nango, E., Kudo, F., Matsushima, Y. and Eguchi, T.