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Publication list (last updated October 2025)

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The publication list including the citation numbers is created in NASA/ADS (here).

First Author

5. **Y. Nakazato**, S. Kazuyuki, A.K. Inoue, M. Ricotti, *Unveiling the Ionized and Neutral ISM at $z > 10$: The Origin of $[OIII]/[CII]$ Ratios from a Sub-parsec Resolution Radiative Transfer Simulation*, 2024, submitted to ApJ, arXiv:2505.12397
- *We computed $[OIII]88\mu m$ and $[CII] 158\mu m$ luminosities for simulated galaxies at $z > 10$, and investigated the physical origins of $[OIII]/[CII]$ ratio enhancement at the high- z Universe.*
4. **Y. Nakazato**, A. Ferrara, *Radiatively driven dusty outflows from compact galaxies at $z > 10$* , 2024, submitted to MNRAS, arXiv:2412.07598
- *We calculated the modified Eddington luminosity considering dusty gas and showed radiation-driven outflow could explain the UV excess at $z > 10$.*
3. **Y. Nakazato**, D. Ceverino, N. Yoshida, *A merger-driven scenario for clumpy galaxy formation in the epoch of reionization: Physical properties of clumps in the FirstLight simulation*, ApJ, 975, 2, 238
- *We showed that observable 100 pc scale clumps at $z > 6$ are mainly formed by tidal-tails of major mergers.*
2. **Y. Nakazato**, N. Yoshida, D. Ceverino, *Simulations of high-redshift $[OIII]$ emitters: Chemical evolution and multi-line diagnostics*, ApJ, 953, 14, 2023
- *We devised an emission model of HII regions in cosmological zoom-in simulations and investigated $[OIII]$ -emitters at $z = 6 - 9$.*
1. **Y. Nakazato**, G. Chiaki, N. Yoshida, et al., *H_2 cooling and gravitational collapse of supersonically Induced gas objects*, ApJL, 927, 1, 2022
- *We performed cosmological simulations and showed the formation of dark matter-less objects via baryon-dark matter relative velocities at $z \sim 20$.*

Proceedings (Refereed)

2. **Y. Nakazato**, *A merger-driven scenario for clumpy galaxy formation in the epoch of reionization: Physical properties of clumps in the FirstLight simulation*, Proceedings of International Astronomical Union, Volume, 391, accepted, in publishing process
1. **Y. Nakazato**, G. Chiaki, N. Yoshida, et al., *The formation of Supersonically Induced Gas Objects (SIGOs) with H_2 cooling*, Proceedings of International Astronomical Union, Volume 362, 2023

Co-Author

summary: **total 19 papers/ (*) 4 papers as the 2nd or 3rd author**

†: Responsible for the theory interpretation part for an observational paper

‡: Generated realistic mock images for an observational paper

19. † R. Marques-Chaves, et al. (incl. **Y. Nakazato**), *Extremely UV-bright starbursts at the end of cosmic reionization*, 2025, arXiv:2510.12411

18. H. Umehata, Y. Tamura, Y. Fudamoto, **Y. Nakazato**, et al. (additional 16 authors), *ELPIS: Accelerated metal and dust enrichment in a proto-cluster core at $z \approx 8$* , 2025, arXiv:2510.11788
- 17.*† Y. Fudamoto, **Y. Nakazato**, D. Ceverino, et al. (additional 24 authors), *Early massive galaxy formation in the core of a galaxy protocluster 650 million years after the Big Bang*, arXiv:2510.11770
- 16.† M. Usui, et al. (incl. **Y. Nakazato**), *RIOJA. JWST and ALMA Unveil the Inhomogeneous and Complex Interstellar Medium Structure in a Star-forming Galaxy at $z = 6.81$* , 2025, ApJL, 991, 2, L38, 2025
15. K. Mawatari, et al. (incl. **Y. Nakazato**), *RIOJA. Merger-induced Clumps in a Galaxy at Redshift 6.81 Revealed by JWST*, 2025, arXiv:2507.02053
- 14.† N. E. P. Lines, R. A. A. Bowler, N. J. Adams, R. Fisher, R. G. Varadaraj, **Y. Nakazato** et al. (additional 25 authors), *JWST PRIMER: A lack of outshining in four normal $z = 4 - 6$ galaxies from the ALMA-CRISTAL Survey*, MNRAS, 539, 3, 2025
- 13.†† T. Kiyota, M. Ouchi, Y. Xu, **Y. Nakazato**, et al. (additional 13 authors), *Comprehensive JWST+ALMA Study on the Extended Ly α Emitters, Himiko and CR7 at $z \sim 7$: Blue Major Merger Systems in Stark Contrast to Submillimeter Galaxies*, 2025, arXiv:2504.03156
12. Y. Sugahara, et al. (incl. **Y. Nakazato**), *RIOJA. Complex Dusty Starburst in a Major Merger B14-65666 at $z = 7.15$* , ApJ, 981, 135, 2025
11. N. Ishii et al. (incl. **Y. Nakazato**), *Detection of the [OI] 63 μ m emission line from the $z = 6.04$ quasar J2054-0005*, PASJ, 77, 139, 2025
- 10.† Y. Harikane, A. K. Inoue, R. Ellis, M. Ouchi, **Y. Nakazato**, et al. (additional 31 authors), *JWST, ALMA, and Keck Spectroscopic Constraints on the UV Luminosity Functions at $z \sim 7 - 14$: Clumpiness and Compactness of the Brightest Galaxies in the Early Universe*, 2024,
- 9.*†† T. S. Tanaka, J. D. Silverman, **Y. Nakazato**, et al. (additional 40 authors), *Crimson Behemoth: a Massive Clumpy Structure Hosting a Dusty AGN at $z = 4.91$* , PASJ, psae091
- 8.* D. Ceverino, **Y. Nakazato**, N. Yoshida, R.S. Klessen, S.C.O. Glover, *Redshift-dependent galaxy formation efficiency at $z = 5 - 13$ in the FirstLight Simulations*, 2024, A & A 489, A244,
7. C. Williams, et al. (incl. **Y. Nakazato**), *The Supersonic Project: Lighting up the faint end of the JWST UV luminosity function*, ApJL, 960, 2, 16, 2024
- [press released \(link\)](#)
- 6.* D. Tsuna, **Y. Nakazato**, T. Hartwig, *A Photon Burst Clears the Earliest Dusty Galaxies: Modeling Dust in High-redshift Galaxies from ALMA to JWST*, MNRAS, 526, 4, 2023
5. W. Lake et al. (incl. **Y. Nakazato**), *The Supersonic Project: Star Formation in Early Star Clusters without Dark Matter*, ApJL, 956, 1, 2023
- 4.†† T. Hashimoto et al. (incl. **Y. Nakazato**), *Reionization and the ISM/Stellar Origins with JWST and ALMA (RIOJA): The core of the highest redshift galaxy overdensity at $z = 7.88$ confirmed by NIRSpec/JWST*, ApJL, 955, 8, 2023
- [press released \(link\)](#)
3. R. Ura, et al. (incl. **Y. Nakazato**), *Detections of [CII] 158 μ m and [OIII] 88 μ m in a Local Lyman Continuum Emitter, Mrk 54, and Its Implications to High-redshift ALMA Studies*, ApJ, 948, 1, 2023
2. C. Williams, et al. (incl. **Y. Nakazato**), *The Supersonic Project: The eccentricity and rotational support of SIGOs and DM GHOSs*, ApJ, 945, 1, 2023
1. W. Lake, et al. (incl. **Y. Nakazato**), *The Supersonic Project: The Early Evolutionary Path of SIGOs*, ApJ, 943, 2, 2023