

Resource Summary Report

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Thunder STORM

RRID:SCR_016897

Type: Tool

Proper Citation

Thunder STORM (RRID:SCR_016897)

Resource Information

URL: <https://github.com/zitmen/thunderstorm>

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Description: Software tool for automated processing, analysis, and visualization of data acquired by single molecule localization microscopy methods such as PALM and STORM. ImageJ interactive and modular plugin for SMLM data analysis and super-resolution imaging.

Abbreviations: ThunderSTORM

Resource Type: software toolkit, data analysis software, software application, software resource, data processing software

Defining Citation: [PMID:24771516](#)

Keywords: automated, processing, analysis, visualization, data, acquired, single, molecule, localization, microscopy, SMLM, imaging, bio.tools

Funding: Czech Science Foundation ;
Charles University ;
European Regional Development Fund ;
European Social Fund

Availability: Free, Available for download, Freely available

Resource Name: Thunder STORM

Resource ID: SCR_016897

Alternate IDs: biotools:thunderstorm

Alternate URLs: <https://bio.tools/thunderstorm>

License: Initial commit licence

Record Creation Time: 20220129T080332+0000

Record Last Update: 20260801T190556+0000

Ratings and Alerts

No rating or validation information has been found for Thunder STORM.

No alerts have been found for Thunder STORM.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 42 mentions in open access literature.

Listed below are recent publications. The full list is available at [ASWG](#) .

Boyer NP, et al. (2026) Spectrin condensates provide a nidus for assembling the axonal membrane-associated periodic skeleton. iScience, 29(1), 114454.

Schubert K, et al. (2025) The polyadenylase PAPI is required for virulence plasmid maintenance in pathogenic bacteria. PLoS pathogens, 21(5), e1012655.

Lima T, et al. (2025) Protocol for studying GABAA receptor subsynaptic domains in rat hippocampal neurons using single-molecule localization microscopy. STAR protocols, 6(3), 104031.

Singh MK, et al. (2025) A constricted mitochondrial morphology formed during respiration. Nature communications, 16(1), 5314.

Hazime KS, et al. (2025) Nanoscale restructuring of the immune synapse with an engager enhances NK cell function. Proceedings of the National Academy of Sciences of the United States of America, 122(38), e2507336122.

Nakatani Y, et al. (2024) Long axial-range double-helix point spread functions for 3D volumetric super-resolution imaging. bioRxiv : the preprint server for biology.

Yeo WH, et al. (2024) Maximizing photon utilization in spectroscopic single-molecule localization microscopy using symmetrically dispersed dual-wedge prisms. bioRxiv : the preprint server for biology.

Lu K, et al. (2024) Near-infrared PAINT localization microscopy via chromophore replenishment of phytochrome-derived fluorescent tag. Communications biology, 7(1), 473.

Jongsma MLM, et al. (2024) Systems mapping of bidirectional endosomal transport through the crowded cell. *Current biology : CB*, 34(19), 4476.

Cloâtre T, et al. (2024) Protocol for matching protein localization to synapse morphology in primary rat neurons by correlative super-resolution microscopy. *STAR protocols*, 5(3), 103160.

Fu B, et al. (2024) RASP: Optimal Single Puncta Detection in Complex Cellular Backgrounds. *The journal of physical chemistry. B*, 128(15), 3585.

Zhou W, et al. (2023) Resolving the nanoscale structure of β -sheet assemblies using single-molecule orientation-localization microscopy. *bioRxiv : the preprint server for biology*.

Lolo FN, et al. (2023) Caveolin-1 dolines form a distinct and rapid caveolae-independent mechanoadaptation system. *Nature cell biology*, 25(1), 120.

Worboys JD, et al. (2023) TIGIT can inhibit T cell activation via ligation-induced nanoclusters, independent of CD226 co-stimulation. *Nature communications*, 14(1), 5016.

Tholen MME, et al. (2023) Mapping Antibody Domain Exposure on Nanoparticle Surfaces Using DNA-PAINT. *ACS nano*, 17(12), 11665.

Kim J, et al. (2023) A systematic study on the use of multifunctional nanodiamonds for neuritogenesis and super-resolution imaging. *Biomaterials research*, 27(1), 37.

Payne-Dwyer AL, et al. (2022) RecA and RecB: probing complexes of DNA repair proteins with mitomycin C in live *Escherichia coli* with single-molecule sensitivity. *Journal of the Royal Society, Interface*, 19(193), 20220437.

Trojanowski J, et al. (2022) Transcription activation is enhanced by multivalent interactions independent of phase separation. *Molecular cell*, 82(10), 1878.

Hsieh TS, et al. (2022) Enhancer-promoter interactions and transcription are largely maintained upon acute loss of CTCF, cohesin, WAPL or YY1. *Nature genetics*, 54(12), 1919.

Di Minin G, et al. (2022) TMED2 binding restricts SMO to the ER and Golgi compartments. *PLoS biology*, 20(3), e3001596.