

# Most Read Articles

*Microscopy* promotes research combined with any type of microscopy techniques, applied to both Biological Science and Physical Science. The most read articles, published between January 2019 and December 2020, are listed below.

## BIOLOGICAL SCIENCE

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### Recent advances in computational methods for measurement of dendritic spines imaged by light microscopy

Shigeo Okabe

*Microscopy*, Volume 69, Issue 4, August 2020, Pages 196–213,  
<https://doi.org/10.1093/jmicro/dfaa016>

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### Implementing machine learning methods for imaging flow cytometry

Sadao Ota, et al.

*Microscopy*, Volume 69, Issue 2, April 2020, Pages 61–68,  
<https://doi.org/10.1093/jmicro/dfaa005>

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### Generative and discriminative model-based approaches to microscopic image restoration and segmentation

Shin Ishii, et al.

*Microscopy*, Volume 69, Issue 2, April 2020, Pages 79–91,  
<https://doi.org/10.1093/jmicro/dfaa007>

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### Peptidoglycan layer and disruption processes in *Bacillus subtilis* cells visualized using quick-freeze, deep-etch electron microscopy

Isil Tulum, et al.

*Microscopy*, Volume 68, Issue 6, 3 December 2019, Pages 441–449,  
<https://doi.org/10.1093/jmicro/dfz033>

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## Genetically encoded orientation probes for F-actin for fluorescence polarization microscopy

Nori Nakai, et al.

*Microscopy*, Volume 68, Issue 5, 9 October 2019, Pages 359–368,  
<https://doi.org/10.1093/jmicro/dfz022>

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## Large-scale single-molecule imaging aided by artificial intelligence

Michio Hiroshima, et al.

*Microscopy*, Volume 69, Issue 2, April 2020, Pages 69–78,  
<https://doi.org/10.1093/jmicro/dfz116>

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## Efficient fluorescence recovery using antifade reagents in correlative light and electron microscopy

Kiminori Toyooka, Naeko Shinozaki-Narikawa

*Microscopy*, Volume 68, Issue 5, 9 October 2019, Pages 417–421,  
<https://doi.org/10.1093/jmicro/dfz029>

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## Identification of lymphatic endothelium in cranial arachnoid granulation-like dural gap

Osamu Kutomi, Sen Takeda

*Microscopy*, Volume 69, Issue 6, December 2020, Pages 391–400,  
<https://doi.org/10.1093/jmicro/dfaa038>

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## Impaired actin dynamics and suppression of Shank2-mediated spine enlargement in cortactin knockout mice

Shinji Tanaka, et al.

*Microscopy*, Volume 69, Issue 1, February 2020, Pages 44–52,  
<https://doi.org/10.1093/jmicro/dfaa001>

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## Inner structure and inclusions in radiocesium-bearing microparticles emitted in the Fukushima Daiichi Nuclear Power Plant accident

Taiga Okumura, et al.

*Microscopy*, Volume 68, Issue 3, June 2019, Pages 234–242,  
<https://doi.org/10.1093/jmicro/dfz004>

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## PHYSICAL SCIENCE

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### Electron tomography imaging methods with diffraction contrast for materials research

Satoshi Hata, et al.

*Microscopy*, Volume 69, Issue 3, June 2020, Pages 141–155,  
<https://doi.org/10.1093/jmicro/dfaa002>

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### Application of machine learning techniques to electron microscopic/spectroscopic image data analysis

Shunsuke Muto, Motoki Shiga

*Microscopy*, Volume 69, Issue 2, April 2020, Pages 110–122,  
<https://doi.org/10.1093/jmicro/dfz036>

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### Machine learning approaches for ELNES/XANES

Teruyasu Mizoguchi, Shin Kiyohara

*Microscopy*, Volume 69, Issue 2, April 2020, Pages 92–109,  
<https://doi.org/10.1093/jmicro/dfz109>

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### High spatiotemporal-resolution imaging in the scanning transmission electron microscope

Ryo Ishikawa, et al.

*Microscopy*, Volume 69, Issue 4, August 2020, Pages 240–247,  
<https://doi.org/10.1093/jmicro/dfaa017>

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### Atomistic and dynamic structural characterizations in low-dimensional materials: recent applications of *in situ* transmission electron microscopy

He Zheng, et al.

*Microscopy*, Volume 68, Issue 6, 3 December 2019, Pages 423–433,  
<https://doi.org/10.1093/jmicro/dfz038>

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## Magnetic-structure imaging in polycrystalline materials by specimen-tilt series averaged DPC STEM

Yoshiki O Murakami, et al.

*Microscopy*, Volume 69, Issue 5, October 2020, Pages 312–320,  
<https://doi.org/10.1093/jmicro/dfaa029>

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## Visualization of different carrier concentrations in *n*-type-GaN semiconductors by phase-shifting electron holography with multiple electron biprisms

Kazuo Yamamoto, et al.

*Microscopy*, Volume 69, Issue 1, February 2020, Pages 1–10,  
<https://doi.org/10.1093/jmicro/dfz037>

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## Automated acquisition of vast numbers of electron holograms with atomic-scale phase information

Yoshio Takahashi, et al.

*Microscopy*, Volume 69, Issue 2, April 2020, Pages 132–139,  
<https://doi.org/10.1093/jmicro/dfaa004>

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## Accuracy improvement of phase estimation in electron holography using noise reduction methods

Yoshihiro Midoh, Koji Nakamae

*Microscopy*, Volume 69, Issue 2, April 2020, Pages 123–131,  
<https://doi.org/10.1093/jmicro/dfz115>

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## Study of the solid electrolyte interphase of Li-O<sub>2</sub> battery electrolyte by analytical transmission electron microscopy

Mitsunori Kitta, Hikaru Sano


*Microscopy*, Volume 69, Issue 4, August 2020, Pages 227–233,  
<https://doi.org/10.1093/jmicro/dfaa012>

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