

# PALM and STORM: Unlocking live-cell super-resolution<sup>†</sup>

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- super-resolution;
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- single molecule

## Abstract

Live-cell fluorescence light microscopy has emerged as an important tool in the study of cellular biology. The development of fluorescent markers in parallel with super-resolution imaging systems has pushed light microscopy into the realm of molecular visualization at the nanometer scale. Resolutions previously only attained with electron microscopes are now within the grasp of light microscopes. However, until recently, live-cell imaging approaches have eluded super-resolution microscopy, hampering it from reaching its full potential for revealing the dynamic interactions in biology occurring at the single molecule level. Here we examine recent advances in the super-resolution imaging of living cells by reviewing recent breakthroughs in single molecule localization microscopy methods such as PALM and STORM to achieve this important goal.

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