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**Bioimaging Applications Using Color Centers in Diamond** DAVID GLENN, HUILIANG ZHANG, ANAT BENADO, Harvard-Smithsonian Center for Astrophysics, NARAYANAN KASTHURI, RICHARD SCHALEK, Harvard Center for Brain Science, JEFF LICHTMAN, Harvard Department of Molecular and Cell Biology, RONALD WALSWORTH, Harvard-Smithsonian Center for Astrophysics — Color centers in diamond offer significant opportunities for the development of new techniques in bioimaging. We present recent work on the application of various color centers in nanodiamond as cathodoluminescent probes for efficient correlative microscopy. We also discuss progress on the use of bulk diamond samples with surface-implanted nitrogen-vacancy (NV) layers for magnetic field sensing, with the specific goal of making sensitive, spatially-localized measurements of free radical concentrations in biological systems.

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