Super-resolution imaging scheme, its requirement for light of a modest intensity limits its use in most practical applications. Now, by employing a reversibly switched green fluorescent protein (rsEGFP), scientists at the Max Planck Institute for Biophysical Chemistry in Göttingen, Germany, have reported an STED-like imaging scheme that makes it possible to image living tissue at resolutions of less than 40 nm using light intensities a million times lower than those of STED. The concept behind this achievement is the use of reversible saturable optical fluorescence transitions (RESOLFT) — a technique that improves imaging resolution by exploiting fluorophores that can be photostwitched between their emissive ‘on’ and non-emissive ‘off’ states. Although this technique has been known for some time, finding suitable fluorophores that can be switched many times without significant degradation has been problematic. The importance of this most recent work is the discovery of a suitable fluorophore — rsEGFP — which can be switched thousands of times from its ‘on’ state (using 405 nm light) to its ‘off’ state (using 491 nm light). The researchers also showed that the scheme could have applications in data storage as well as storage applications in data storage as well as storage.