

Tiny Sensors Could Give an Atom-Level View of Proteins

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Two reports published online in *Science* on Thursday open up the possibility that researchers may be able to determine the structure of individual proteins in living cells. Although the work is still in early stages, the potential is that researchers could get a better handle on the role of proteins in disease.

Physicists in the U.S. and Germany report important steps toward magnetic resonance imaging, or MRI, of molecules in two separate studies. In both reports, the researchers show how specially modified diamond flakes can be used as nanoscale magnetic field detectors. These tiny sensors can elucidate the structure of single organic molecules. With nanoscale MRI, researchers may one day be able to directly image proteins and other molecules at the atomic scale.

“If you can see on single molecule scale what is going on, and understand more details about what is happening, you may be able to find exactly what the problem is and target it specifically,” says Texas A&M University electrical engineer [Philip Hemmer](#) [1], who was not involved in the study but wrote a perspective on the work for the same issue of *Science*.

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http://www.mdtmag.com/news/2013/02/tiny-sensors-could-give-atom-level-view-proteins?qt-video_of_the_day=0&qt-most_popular=0

Links:

[1] <http://www.ece.tamu.edu/People/bios/hemmer.php>