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Engineers revolutionise molecular microscopes

28.06.2019 - Engineers at Otto von Guericke University Magdeburg, in cooperation with colleagues at Forschungszentrum Jülic have developed a method for measuring the electrical potentials of molecules and molecular surfaces with previou unattained precision and speed. Using so-called scanning quantum dot microscopy, they have succeeded for the first time producing high-resolution maps of molecular electrical potentials, i.e. the electrical fields occurring in the environment of all matt within minutes. The research results were published in the internationally renowned journal ›Nature Materi (https://www.nature.com/articles/s41563-019-0382-8) .

Prof. Rolf Findeisen, together with his doctoral student Michael Maiworm, developed a controller, an algorithm that controls t scanning process, for the novel microscopy method. This makes it possible to precisely measure the potentials of molecu resolution in just a few minutes, which has been very tedious up to now. "With the new controller, we can now easily scan t entire surface of a molecule just like with a normal atomic force microscope," says Christian Wagner from Forschungszentru Jülich. This enables high-resolution images of the potential that previously seemed unattainable.

You can find the complete article ›here (https://www.ovgu.de/unimagdeburg/en/University/In+Profile/Key+Profile+Areas/Research/Engineers+of+the+University+of+Magdeburg+revolutionize+mo cular+microscopy-p-75618.html) .

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