



ICFO in Nature Physics

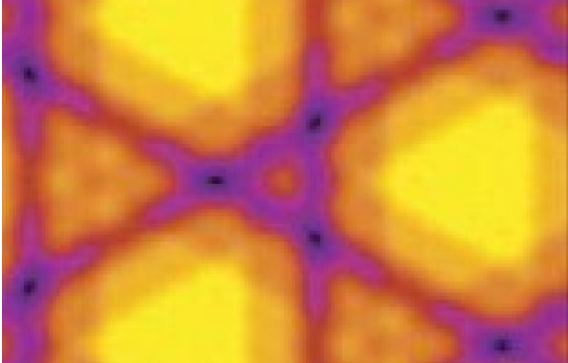
Prof. Lewenstein contributes his news & views about polar molecules in topological order

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The ICFO Professor and member of ICREA, Maciej Lewenstein has contributed an article on atomic and molecular physics to the section News and Views of the last Nature Physics review. The article, entitled "Polar molecules in topological order", discusses how to realize quantum states of matter with topological order, which can be used for robust quantum computing.

As it is indicated in Prof. Lewenstein's notes, quantum states of matter with topological order are of great fundamental -and potential practical- interest. Polar molecules stored in optical lattices could offer a platform for realizing such "exotic" states.

Prof. Lewenstein is currently leading the quantum optics theory group in ICFO. The group works on a very broad spectrum of problems, from standard quantum optics, through physics of matter, to quantum information theory, and physics of ultra-cold atoms.



Atoms and molecules can be placed in a desired arrangement by creating optical lattices with the required geometry.