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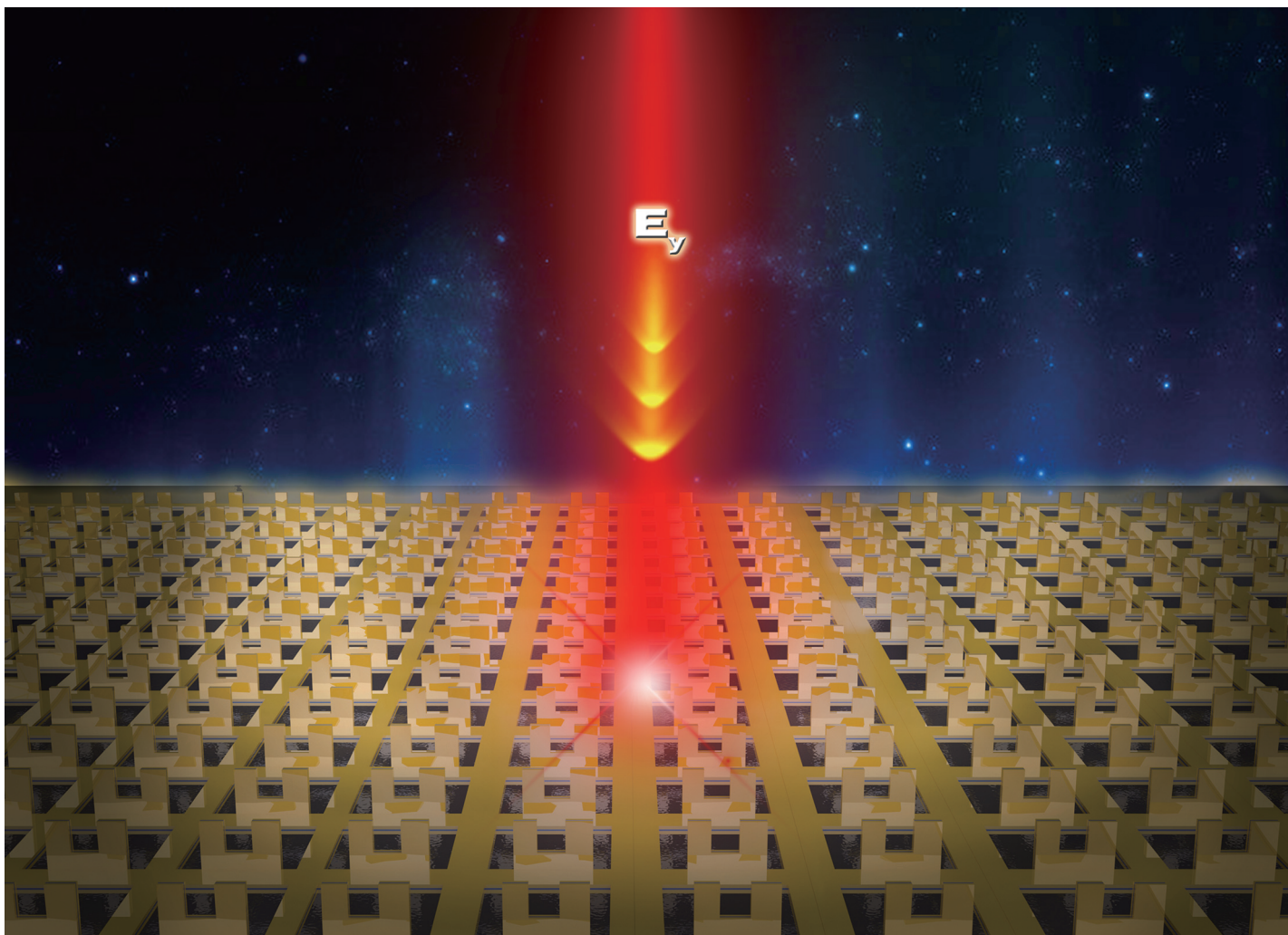
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Elemental answers

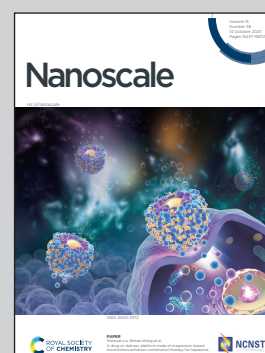


Showcasing research from Prof. Feng Luo's group at School of Materials Science and Engineering, Nankai University, Tianjin, China.

Enhanced Faraday rotation by Fano resonance in substrate-free three-dimensional magnetoplasmonic structures

In the three-dimensional split-ring structure fabricated by focused ion beam (FIB) technology, with y -polarized light normal incidence, three-dimensional coupling current is formed between the vertical split-ring and the bottom square hole, which causes the excitation of an unusual Fano resonance. The Fano resonance brings a larger Faraday rotation (FR), with a sign reversal of FR. Similar behaviors also exist in three-dimensional nanopillar structure and three-dimensional nanoring structure in simulation results.

As featured in:



See Hua Yu Feng, Jun Qin, Lei Bi, Feng Luo *et al.*, *Nanoscale*, 2023, 15, 15583.