

Title of a very interesting and far-reaching investigation*

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The text of the abstract is to go here. The description of the research will likely involve citing some references.¹ It may also require you to show a figure to illustrate a point or two of the conversation. The figure could go here, for example.

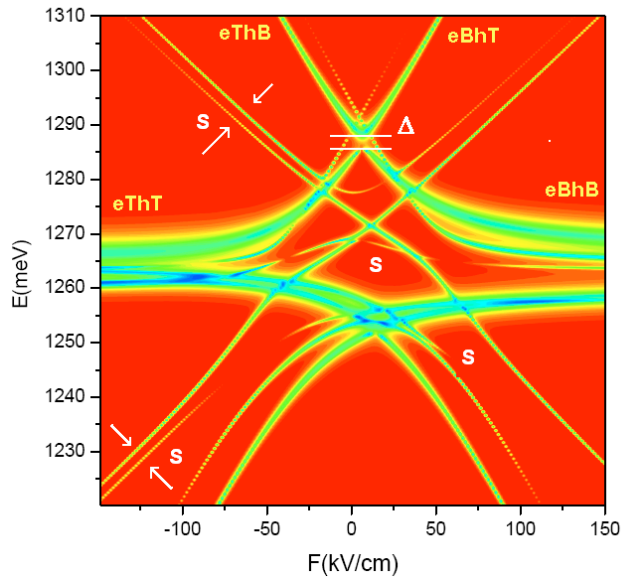


Fig. 1. Colorful figures that help you describe the work are welcome in the abstract. Include an accompanying figure caption.

A recent and interesting approach to achieve quantum gate operations in a solid-state system is to implement an optically driven quantum gate in a system of two vertically coupled self-assembled quantum dots.² This *quantum dot molecule* (QDM) allows coupling and coherence between the dots, playing a central role in gate

operation. Time-resolved PL spectroscopy on QDMs under an electric field has allowed the control of coupling mechanisms via interdot tunneling and field tuning of the levels. However, the dynamical coupling between dots arising from Coulomb interactions could provide an important channel that may compete with interdot tunneling under suitable conditions.

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¹ A. Name, B. Lastname, and C. Tailname, Phys. Rev. Lett. **22**, 1234 (2006).

² M. Bayer, *et al.*, Science **291**, 451 (2001).