Review of Efficient wireless non-radiative mid-range energy transfer

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This paper introduces a non-radiative way to lead strong coupling in a medium-range, which can be used for wireless power transfer in a distance between states.

At the beginning of this paper, the authors point out that wireless power/energy transfer is a topic which is introduced more than hundred years ago by Nikola Tesla, who made most contributions to it. However, only little development and improvement we have today.

Moreover, this paper shows us radiative technology using high directivity of high frequency waves to transfer power wirelessly is effective. However, this method has backwards, for example, it needs to aim at targets real-time and there need to be no barrier. To have a better way for wireless power transfer, this team introduced long-lived oscillatory resonant electromagnetic modes, using resonant coupling between two objects which have same frequency to increase the power transmission distance.

The main part of this paper is the experiment results and data and models of long-lived oscillatory resonant electromagnetic modes.

The conclusion is pointed out that this is a future science. We still need more research on wireless power transfer. Although it is a great way for coupling power transmission , it is still can not build a real WPT system in a medium-range using.

**Reference**

Efficient wireless non-radiative mid-range energy transfer Aristeidis Karalis a,\*, J.D. Joannopoulos b , Marin Soljacˇic´ b a Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139, USA b Department of Physics, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139, USA