



Graphene biointerfaces for optical stimulation of cells

Description

Researchers have developed a technique that allows them to speed up or slow down human heart cells growing in a dish on command – simply by shining a light on them and varying its intensity. The cells are grown on a material called graphene, which converts light into electricity.

See video (University of California): www.eurekalert.org/multimedia/927967

Savchenko, A., Cherkas, V., Liu, C., Braun, G. B., Kleschevnikov, A., Miller, Y. I., & Molokanova, E.. (2018). Graphene biointerfaces for optical stimulation of cells. Science Advances

, 4(5)

Plain numerical DOI: 10.1126/sciadv.aat0351

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“This study presents a novel graphene-based optoelectronic platform for noninvasive optical stimulation of genetically intact cells”

Matt, A., Liang, H., Fishman, M., Gracheva, E., Wang, F., Zhang, X., ... Zhou, C.. (2023). Graphene-enabled optical cardiac control in *Drosophila melanogaster*. In J. A. Izatt & J. G. Fujimoto (Eds.), Optical Coherence Tomography and Coherence Domain Optical Methods in Biomedicine XXVII

(p. 81). SPIE

Plain numerical DOI: 10.1117/12.2652964

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2. Graphene

Date Created

April 2023

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