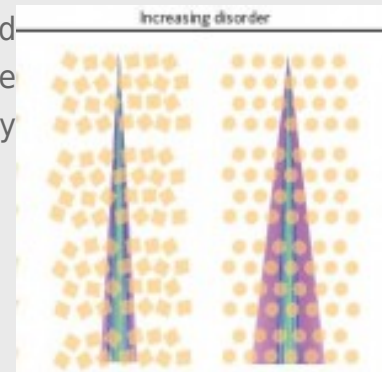


Disorder Sets Light Straight - published in Nature Physics News and Views

In a recent [Nature Physics News & Views](#) article entitled 'Disorder sets Light straight' [Jorge Bravo-Abad](#) discusses the fascinating discovery of light supercollimation assisted by transverse Anderson localization.



Abstract:

Non-diffractive light propagation based on perfectly periodic photonic structures has one fundamental drawback: it only works within a narrow frequency bandwidth, which makes supercollimation effects very sensitive to frequency variations of the propagating beam. Hsieh et al. now demonstrate that disorder can become an unexpected ally for tackling this problem. At first sight the approach of Hsieh et al. could seem counterintuitive. It is well known that structural disorder is detrimental to any optical functionality of a periodic photonic structure. But instead of battling disorder, they discovered a fundamental way to leverage it. As they report in *Nature Physics*, Pin-Chun Hsieh and colleagues demonstrate how disorder can enhance the collimation of light through Anderson localization – a universal wave phenomenon introduced almost six decades ago in the context of electronic transport in disordered solids.