

Abstract Submitted
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Simple Model for the Photon Energy Dependence of Optical Nuclear Polarization in GaAs PATRICK COLES, JEFFREY REIMER, University of California, Berkeley — It was discovered forty years ago that nuclear Zeeman order can be induced by prolonged irradiation of a bulk semiconductor with near-band-gap light. The microscopic mechanism of this optical nuclear polarization process is still under debate. Yet, we are able to predict a major feature of the data, the dramatic photon-energy dependence, from a simple model, irrespective of the spin microscopies. We discuss this model in the context of semi-insulating GaAs.

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