

Abstract Submitted
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Chalcopyrite Crystals. HERATH PATHIRANAGE PIYATHILAKA, DEREK BAS, Department of Physics, West Virginia University, Morgantown, West Virginia, 26506-6315, KEVIN ZAWILSKI, PETER SCHUNEMANN, BAE Systems, Inc., Nashua, New Hampshire 03061, ALAN BRISTOW, Department of Physics, West Virginia University, Morgantown, West Virginia, 26506-6315 — CdSiP₂ (CSP) and CdGeP₂ (CGP) are negative uniaxial II-IV-V₂ chalcopyrite compound semiconductors. Optical rectification is demonstrated in CSP and CGP providing terahertz (THz) generation. These sources are compared to ZnGeP₂ (ZGP)^[1] over a wavelength range of 1200 nm to 2320 nm at an average pump power 3.7 mW and emission strength is fitted to these two dependencies. During this analysis α (linear absorption coefficient), β (two-photon absorption), and γ (three-photon absorption) are taken into an account while comparing with the values of the ZGP and a conclusion is made of the properties of CSP and CGP. [1] J. D. Rowley *et al*, Optics Letters, Vol. 37, No. 5 (2012)

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