22

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Title:Transmittances of terahertz pulses through organic copper phthalocyanine films on Si under optical carrier excitation

Authors: Yoo, Hyung Keun (1); Kang, Chul (1); Lee, Joong Wook (1); Yoon, Youngwoon (2); Lee, Hanju (2); Lee, Kiejin (2); Kee, Chul-Sik (1)

Author affiliation:(1) Nanophotonics Laboratory, Advanced Photonics Research Institute, GIST, Gwangju 500-712, Korea, Republic of; (2) Department of Physics, Sogang University, Seoul 121-742, Korea, Republic of; (3) Center for Subwavelength Optics, Seoul 151-747, Korea, Republic of

Corresponding author: Yoo, H.K.

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Publisher:Japan Society of Applied Physics, 1-12-3 Kudan-Kita,k Chiyoda-ku, Tokyo, 102, Japan Abstract:Transmittances of terahertz (THz) pulses through organic copper phthalocyanine (CuPc) films on Si were investigated under optical carrier excitation. As the external laser power increases, the difference between transmitted energies of THz pulses along the forward (CuPc/Si) and backward (Si/CuPc) directions increases. The transmitted energy in the backward direction is larger than six times that in the forward direction under a laser beam of 300mW. The big difference between the transmitted energies was explained in terms of the density of photocarriers injected into the CuPc film and carrier transport characteristics correlated with the degree of disorder of CuPc molecules. © 2012 The Japan Society of Applied Physics.

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