

Abstract Submitted
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High pressure property of MgO under shock compression to 1 TPa¹ KOHEI MIYANISHI, Graduate School of Engineering, Osaka University, NORIMASA OZAKI, YOSHINORI TANGE, TAKU TSUCHIYA, TOMOAKI KIMURA, TATSUYA JITSUI, TOMOFUMI SODA, YUJI NOSAKA, NAOYA YOKOYAMA, YUTO ASAUMI, HIROYUKI URANISHI, MICHEL KOENIG, YOICHI SAKAWA, TOMOKAZU SANO, TAKAYOSHI SANO, TOMMASO VINCI, RYOSUKE KODAMA — Optical property of highly compressed MgO has been investigated using laser-driven smoothly decaying shock wave. Shock Hugoniot and temperature measurements for MgO were performed for the first time in TPa pressure regime. Shock compressed MgO is transparent near 300 GPa, meanwhile it is not highly reflecting up to 1 TPa. This wide range opaque property is not comparable with other crystalline dielectrics.

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