

Radiation Effects in Low-Dielectric-Constant Methyl-Silsesquioxane Films

M.P. Petkov¹, K.G. Lynn², K.P. Rodbell³, W. Volksen⁴ and R.D. Miller⁴

¹ *Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Drive, Pasadena, CA 91109*

² *Department of Physics, Washington State University, Pullman, WA 99164*

³ *IBM T.J. Watson Research Center, P.O. Box 218, Yorktown Heights, NY 10598*

⁴ *IBM Almaden Research Center, 650 Harry Road, San Jose, CA 95120*

Abstract

Low-*k* methyl-silsesquioxane films were irradiated by a 2 keV low-current (~30 fA) positron beam. Bond-breaking was observed at <0.1 Gy cumulative doses, implying more significant effects upon electron irradiation in space or by electron microscope.