

Optoelectronics**Research from F. Grillot et al broadens understanding of optoelectronics**

2008 APR 7 - (VerticalNews.com) -- "Silicon-on-insulator (SOI) optical waveguides with high electromagnetic field confinement suffer from side-wall roughness, which is responsible for strong scattering inducing propagation loss. A theoretical investigation of the influence of geometry in submicron SOI waveguides on the scattering loss due to side-wall roughness is reported," investigators in Rennes, France report. "Scattering loss coefficient is derived for both narrow and flat SOI strip waveguides. It is shown that scattering loss coefficient is significantly increased for narrow waveguides compared with flatter ones," wrote F. Grillot and colleagues. The researchers concluded: "These results show that attention has to be paid to waveguide geometry, as scattering effects are the predominant source of optical losses in strip submicron SOI optical waveguides." Grillot and colleagues published their study in *Iet Optoelectronics* (Influence of waveguide geometry on scattering loss effects in submicron strip silicon-on-insulator waveguides. *Iet Optoelectronics*, 2008;2(1):1-5). For additional information, contact F. Grillot, Institute National Science Applied, Laboratory Etudes Nanostruct Semicond, CNRS, UMR, FOTON, 20 Av Buttes Coesmes, F-35043 Rennes, France. The publisher of the journal *Iet Optoelectronics* can be contacted at: Institute Engineering Technology-Iet, Michael Faraday House Six Hills Way Stevenage, Hertford SG1 2AY, England. Keywords: Electromagnet, Electromagnetic, Electronics, Engineering, Geometry, Mathematics, Optoelectronics, Technology, u-blox Ag. This article was prepared by Journal of Technology & Science editors from staff and other reports. Copyright 2008, Journal of Technology & Science via VerticalNews.com.

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