



Article

Antireflection Enhancement by Composite Nanoporous Zeolite 3A–Carbon Thin Film

Maksym Stetsenko ^{1,2}, Salvatore A. Pullano ³, Tetiana Margitych ⁴, Lidia Maksimenko ², Ali Hassan ¹, Serhii Kryvyi ^{2,5}, Rui Hu ¹, Chun Huang ¹, Roman Ziniuk ¹, Sergii Golovynskyi ^{1,2}, Ivan Babichuk ^{2,6}, Baikui Li ^{1,*}, Junle Qu ^{1,*} and Antonino S. Fiorillo ³

¹ Key Laboratory of Optoelectronic Devices and Systems of Ministry of Education and Guangdong Province, College of Physics and Optoelectronic Engineering, Shenzhen University, Shenzhen 518060, China; stetsenkomax@gmail.com (M.S.); 15alirao@gmail.com (A.H.); rhu@szu.edu.cn (R.H.); 2172281522@email.szu.edu.cn (C.H.); romanziniuk.94@hotmail.com (R.Z.); golovynskyi@gmail.com (S.G.)

² V. Lashkaryov Institute of Semiconductor Physics, National Academy of Sciences of Ukraine, 03680 Kyiv, Ukraine; maximenko_lida@ukr.net (L.M.); serkriviy@mail.ru (S.K.); babichuk@isp.kiev.ua (I.B.)

³ Department of Health Sciences, Magna Græcia University of Catanzaro, 88100 Catanzaro, Italy; pullano@unicz.it (S.A.P.); nino@unicz.it (A.S.F.)

⁴ Kiev Institute for Nuclear Research, National Academy of Sciences of Ukraine, 03680 Kyiv, Ukraine; margtanya@gmail.com

⁵ Institute of Physics, Polish Academy of Sciences, 02-668 Warsaw, Poland; serkriviy@mail.ru

⁶ Intelligent Manufacturing Division, Wuyi University, Jiangmen 529020, China

* Correspondence: libk@szu.edu.cn (B.L.); jlqu@szu.edu.cn (J.Q.)

The SEM analysis was performed using EVO HD microscope from Carl Zeiss.

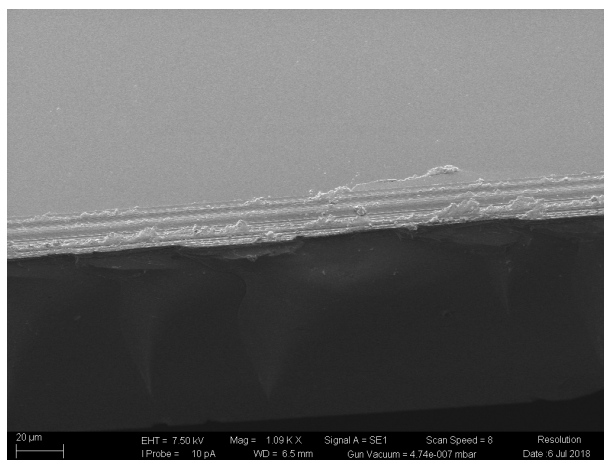


Figure S1 SEM ITO-glass cover slip

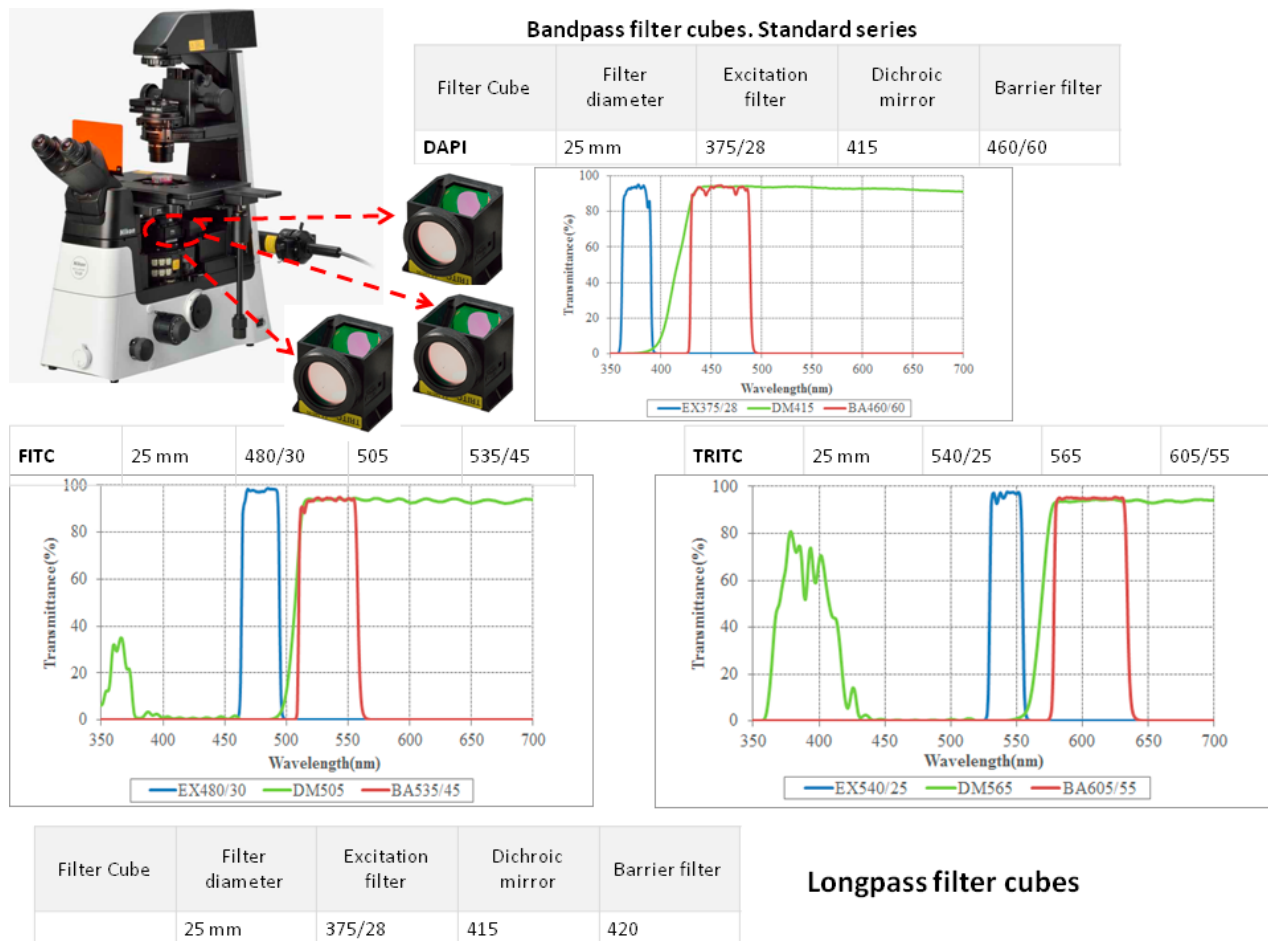


Figure S2 Optical parameters of band and longpass for fluorescence images

The distance between the points at which the reflectance spectra were measured is 1 cm.

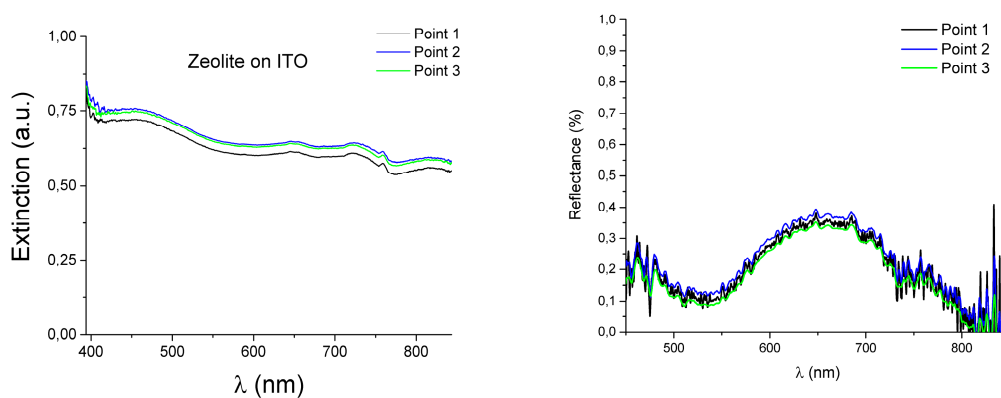


Figure S3 Spectral characteristics in different points of zeolite/ITO/glass coatings