Synthesis and Characterization of Perfluoroether Oligomers with Silane Fuctional Group for Anti-Reflection Film

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Hydroxy terminated perfluoroether oligomers were synthesized from perfluorinated diol and hexafluoro-isopropyl methanesulfonyl ether. Perfluoroether oligomers were functionalized by established procedures to introduce both carboxylic acid groups and alkoxysilane groups in sites within the chain extended segments. The oligomers were characterized by NMR, FT-IR spectroscopy, GPC. This fluorinated alkoxy silane compounds can be used for anti-reflective coating materials which exhibit good anti-smudge property with an anti-reflective characteristic and also good adhesion to ITO layer.