

Electronic Supporting Information

Coloured hybrid materials: exploiting an emergent surface property of fluorinated Al₂O₃ containing anthocyanins and betacyanins

Erik Pérez-Ramírez,^a Ivan Kaleb Torres,^a Ma. Jesús Martínez-Ortiz,^b José L. Rivera,^c Carlos Felipe,^d Ariel Guzmán,^b Ilich A. Ibarra*^a and Enrique Lima*^a

^a Laboratorio de Físicoquímica y Reactividad de Superficies (LaFREs), Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México, Circuito exterior s/n, Cd. Universitaria, Del., Coyoacán CP, Ciudad de México, 04510, Mexico.

^b ESIQIE - Instituto Politécnico Nacional, Avenida IPN UPALM Edificio 7, Zacatenco, 07738 México D.F., México.

^c Graduate School of Physics Engineering, Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Michoacán, Mexico

^d Department of Biosciences and Engineering, CIEMAD-Instituto Politécnico Nacional, Ciudad da México, 07340, Mexico

Fig S1. Powder XRD patterns of boehmite (3a) precursors of gamma alumina samples and gamma alumina samples (b)

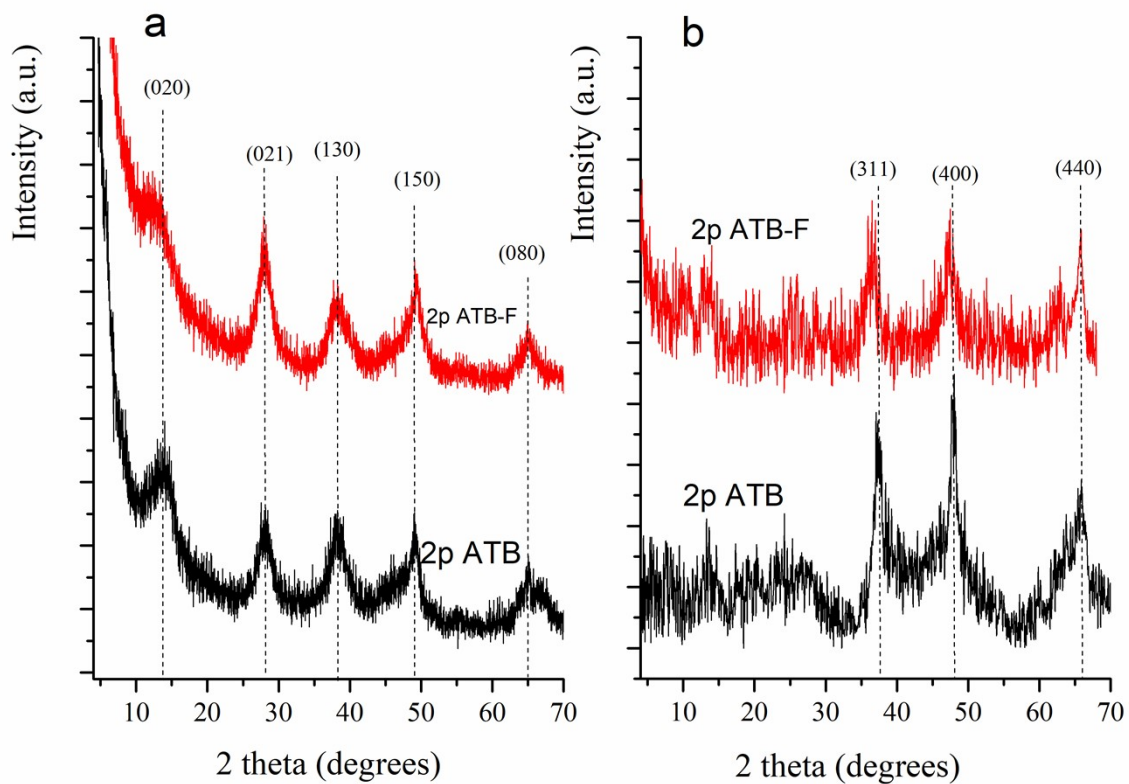


Fig S2. ^{19}F NMR MAS spectrum of sample 2p ATB-F

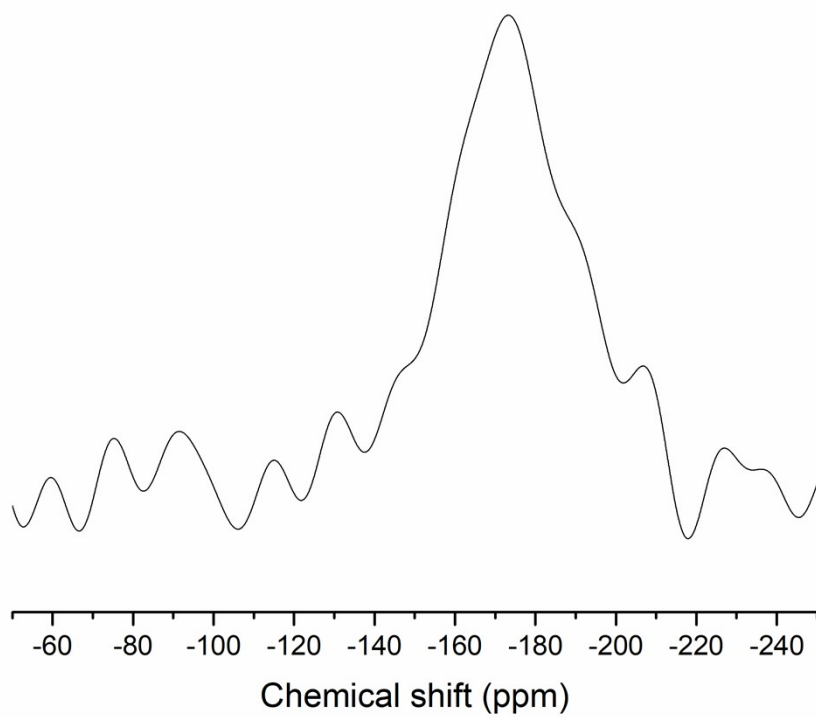


Fig S3. XPS spectra of F1s in fluorinated alumina samples synthesized by sol-gel using 2 butanol (2bATB-F) and 2 propanol (2pATP-F) as solvents.

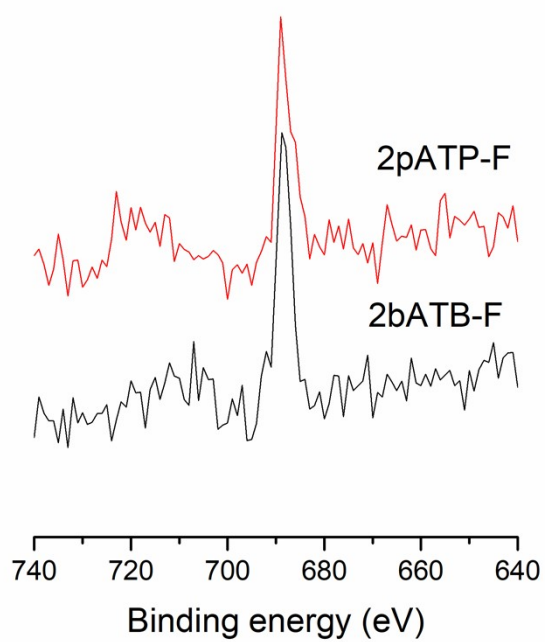


Fig S4. FTIR spectra of alumina samples synthesized by sol-gel using 2 butanol.

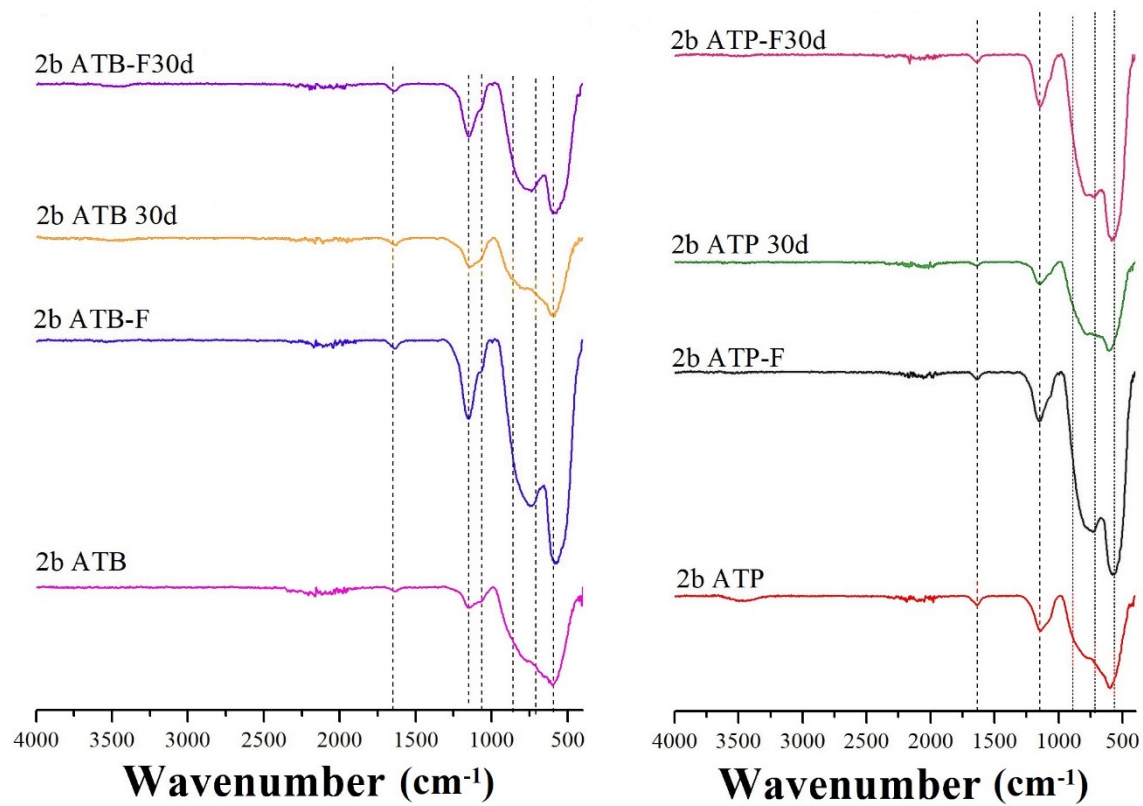


Fig S5. FTIR spectra of alumina samples synthesized by sol-gel using 2 butanol and colored with anthocyanin.

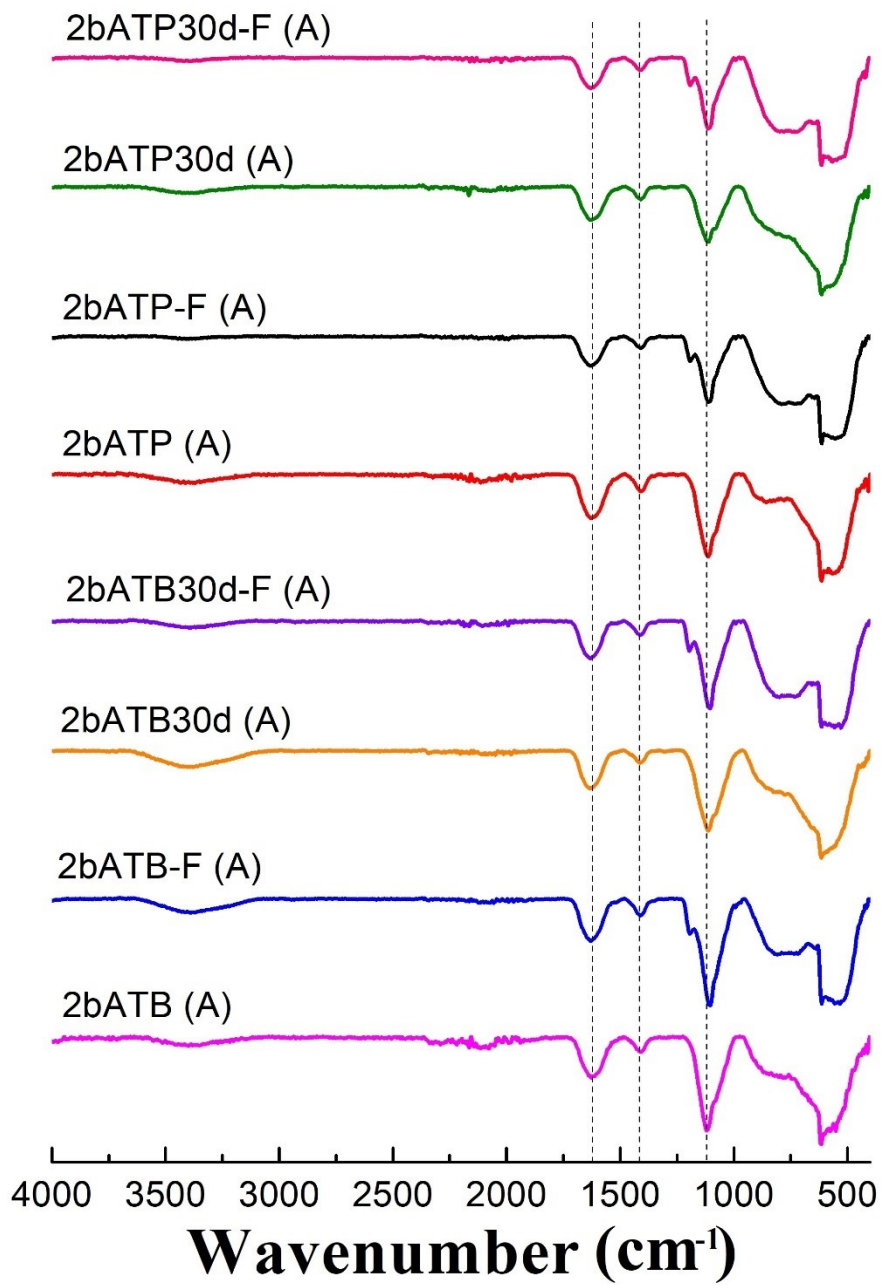


Fig S6. FTIR spectra of alumina samples synthesized by sol-gel using 2 butanol and colored with betacyanin.

