Elucidation of acid strength effect on ibuprofen adsorption and release by aluminated mesoporous silica nanoparticles†

N.H.N. Kamarudin,[a] A. A. Jalil,[*a,b] S. Triwahyono,[c,d] M. R. Sazegar, [c,d] S. Hamdan,[e] S. Baba,[e] A. Ahmad [a,b]

[a]*Department of Chemical Engineering, Faculty of Chemical Engineering, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia*
[b]*Institute of Hydrogen Economy, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia*
[c]*Department of Chemistry, Faculty of Science, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia*
[d]*Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia.*
[e]*Department of Biological Science, Faculty of Bioscience and Bioengineering, Universiti Teknologi Malaysia, 81310 UTM Skudai, Johor, Malaysia.*

Corresponding author:

Assoc. Prof. Dr. Aishah A. Jalil,
Institute of Hydrogen Economy,
Faculty of Chemical Engineering,
Universiti Teknologi Malaysia
81310 UTM Johor Bahru, Johor, Malaysia
Tel : +60-7-5535581 Fax : +60-7-5588166
Email : aishah@cheme.utm.my

ELECTRONIC SUPPLEMENTARY INFORMATION

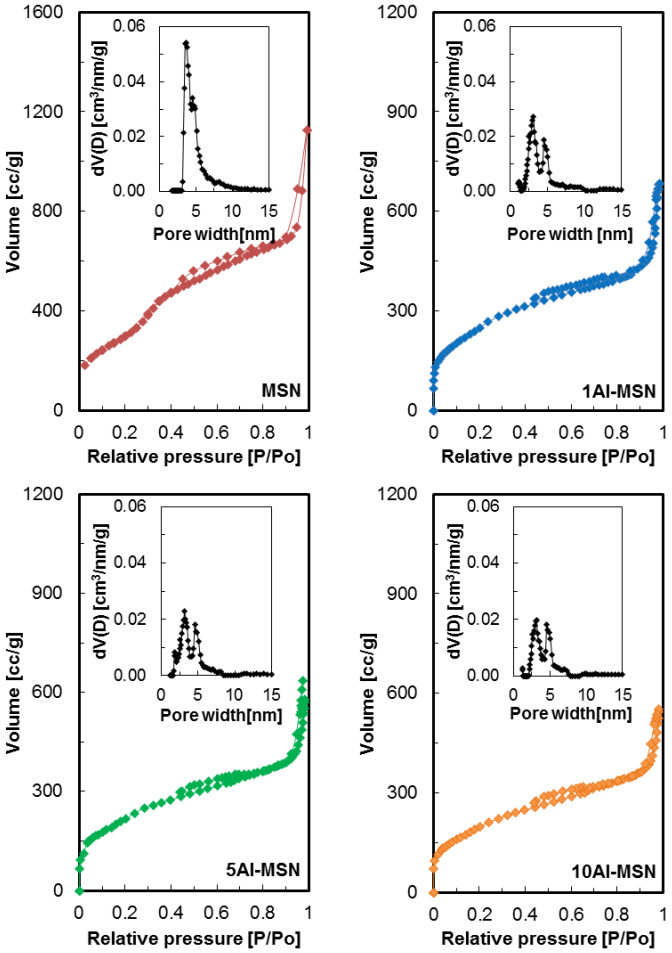

Fig. S1. Nitrogen adsorption–desorption isotherms and pore distribution (inset figures) of bare MSN and Al-MSNs

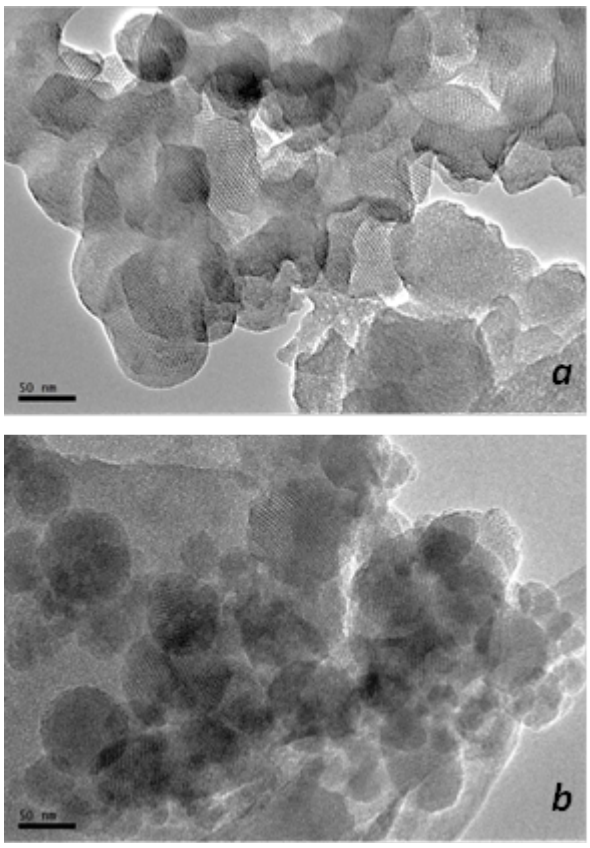

Fig. S2. TEM images of (a) MSN and (b) 10Al-MSN

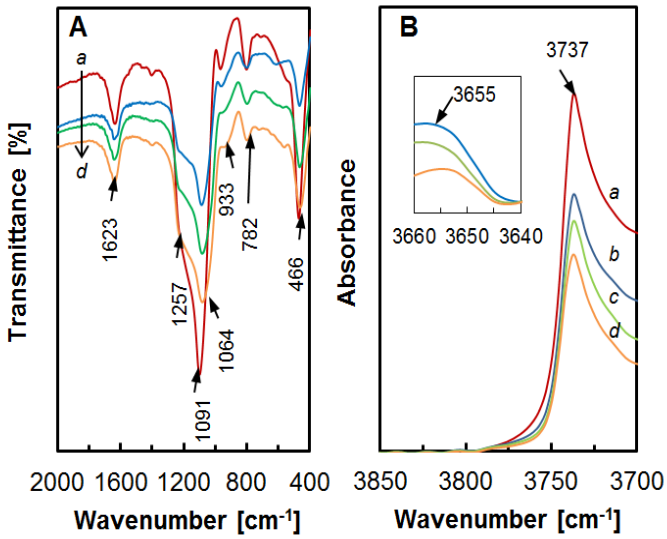

Fig. S3. FTIR spectra of (a) MSN; (b) 1Al-MSN; (c) 5-Al-MSN; (d) 10-Al-MSN in the range of (A) 2000-400 cm^{-1} (B) 3850-3700 cm^{-1}