

SUPPLEMENTARY MATERIAL

**Magnetic solid-phase extraction of caffeine from surface water samples with
micro-meso porous activated carbon/Fe₃O₄ nanocomposite prior to its
determination by GC-MS**

N. Manousi^a, E. A. Deliyanni^b, E. Rosenberg^{*c}, G. A. Zachariadis^a,

^a *Laboratory of Analytical Chemistry, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece*

^b *Laboratory of Chemical and Environmental Technology, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece*

^c *Institute of Chemical Technology and Analytics, Vienna University of Technology, 1060 Vienna, Austria*

Table S1. Textural parameters of Fe₃O₄, B and Bm

Adsorbent	SSA m ² /g	V _{tot} (cm ³ /g)	V _{mic} (cm ³ /g)	V _{mes} (cm ³ /g)
Fe ₃ O ₄	106.6	0.404	0	0.404
B	2490	1.619	0.293	1.326
Bm	1559.8	1.170	0.297	0.873

Table S2. Results of the analysis of caffeine in real surface water samples

Analyte	River Surface Water Sample			Lake Surface Water Sample		
	Added (ng mL ⁻¹)	Found (ng mL ⁻¹)	RR %	Added (ng mL ⁻¹)	Found (ng mL ⁻¹)	RR %
Caffeine	0	ND	-	0	ND	-
	6.0	5.8 ± 0.6	96.7	60.0	5.6 ± 0.5	93.3

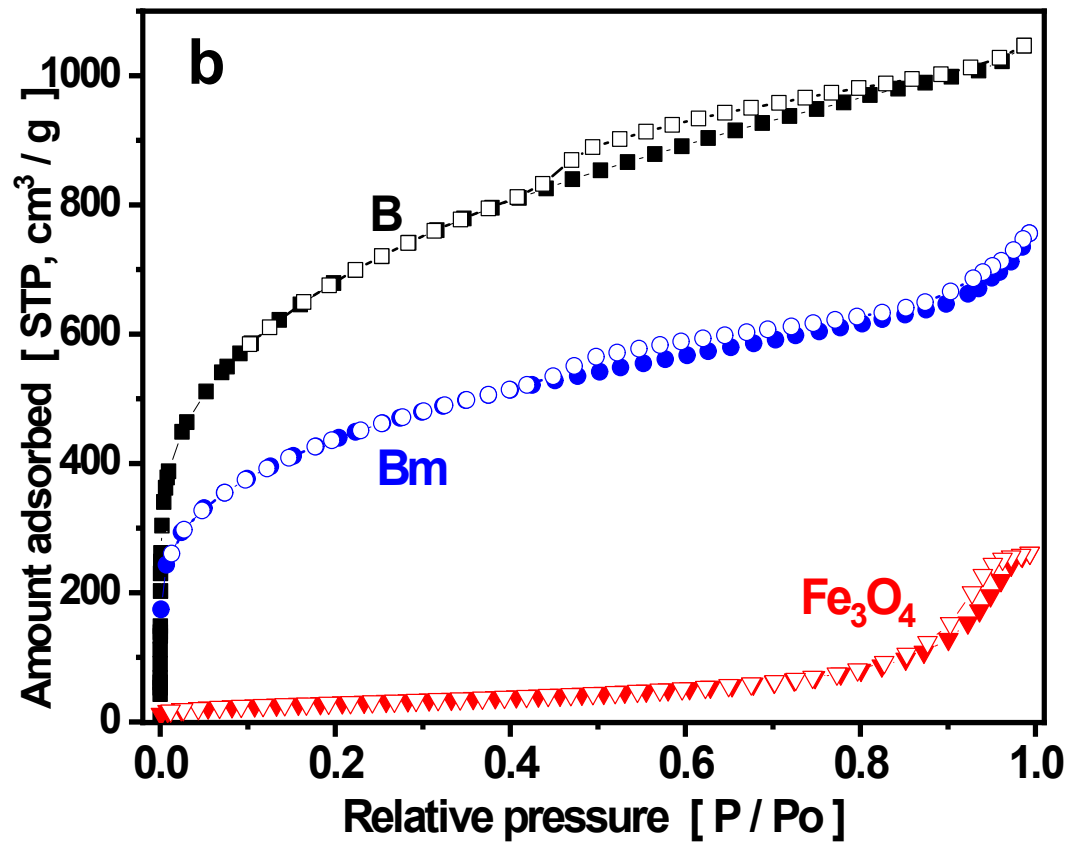


Figure S1. N_2 adsorption (open symbols)–desorption (closed symbols) isotherms for Bm

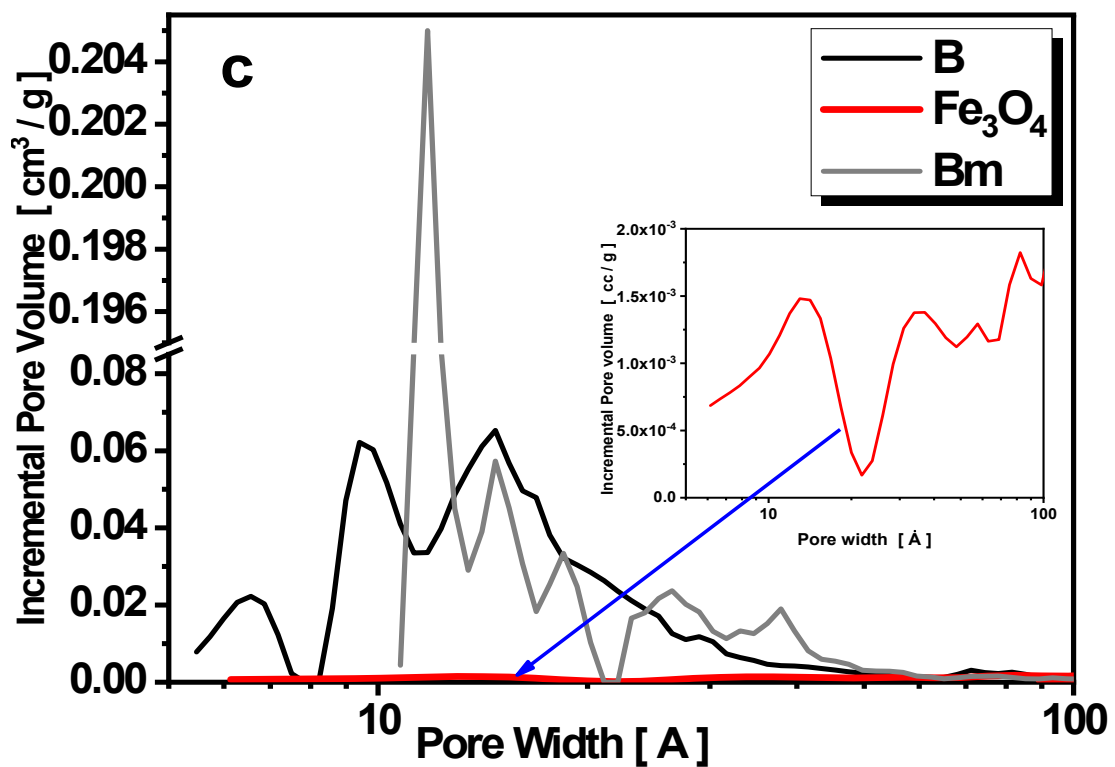


Figure S2. Pore size distribution for Bm

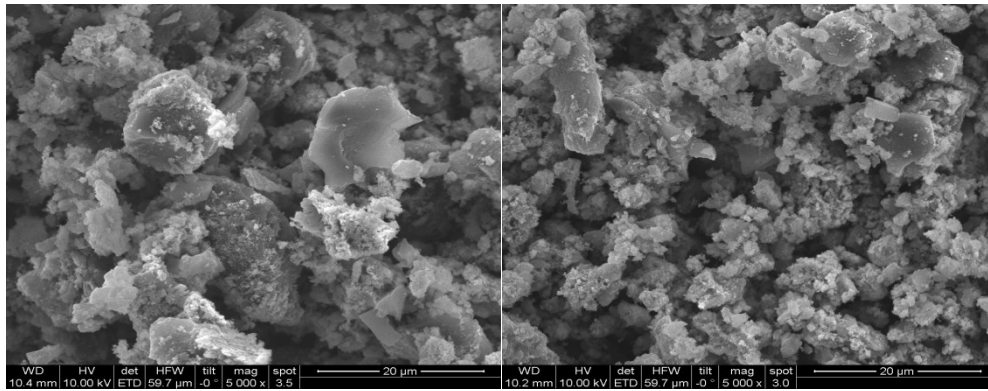


Figure S3. SEM micrographs of Bm activated carbon before (left) and after (right) the adsorption of caffeine