

Layered Zinc Hydroxide Salts Intercalated with Anionic Surfactants and Adsorbed with UV Absorbing Organic Molecules

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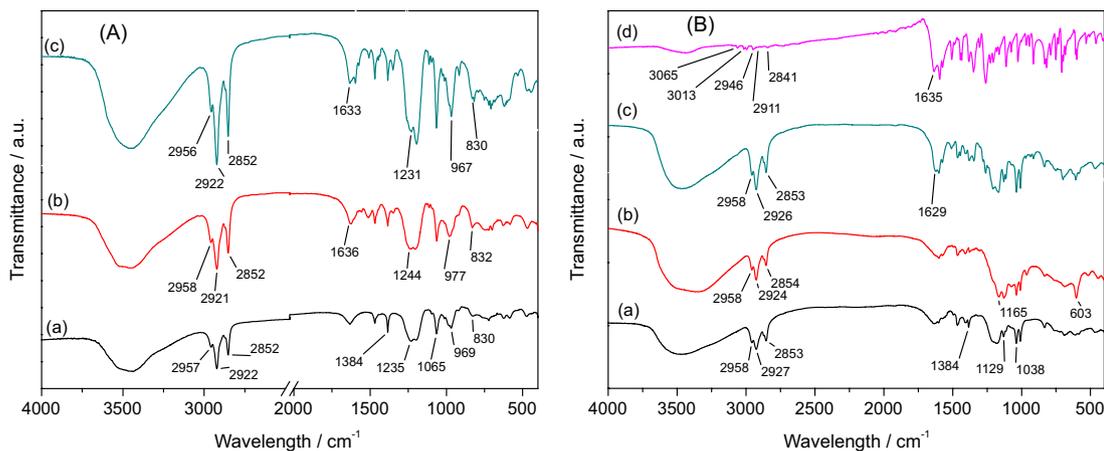


Figure S1. FTIR spectra of LHS/S samples before (a) and after adsorption with benzophenone-3: LHS/Sb3-mh (b); LHS/Sb3-m (c) and raw benzophenone-3 (d); where S = DDS (A) and DBS (B).

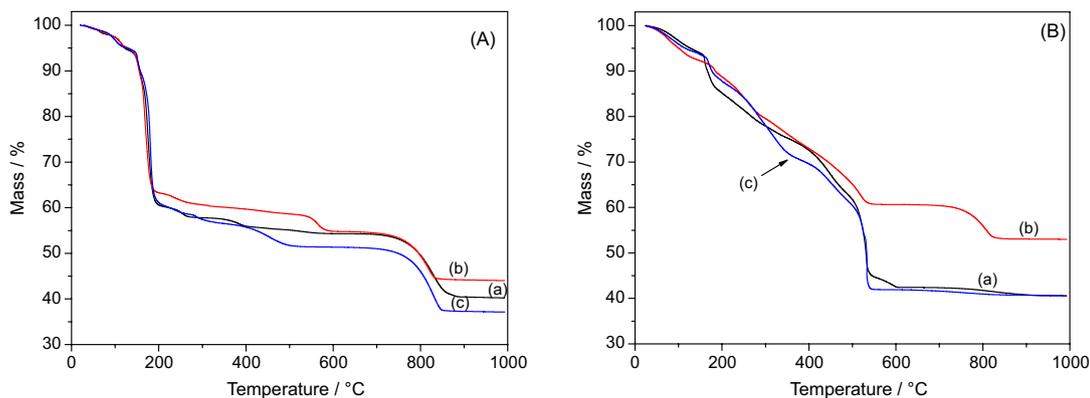


Figure S2. Thermogravimetric (TGA) curves of LHS/S (a); LHS/Sb3-mh (b) and LHS/Sb3-m (c), whereby S (A) DDS and (B) DBS.

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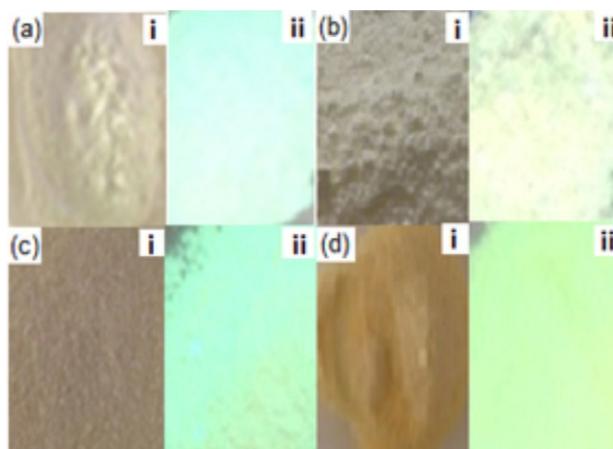


Figure S3. Color of the compounds: LHS/DDSb3-mh (a); LHS/DDSb3-m (b); LHS/DBSb3-mh (c) and LHS/DBS3-m (d), without (i) and under UV irradiation (365 nm) (ii).

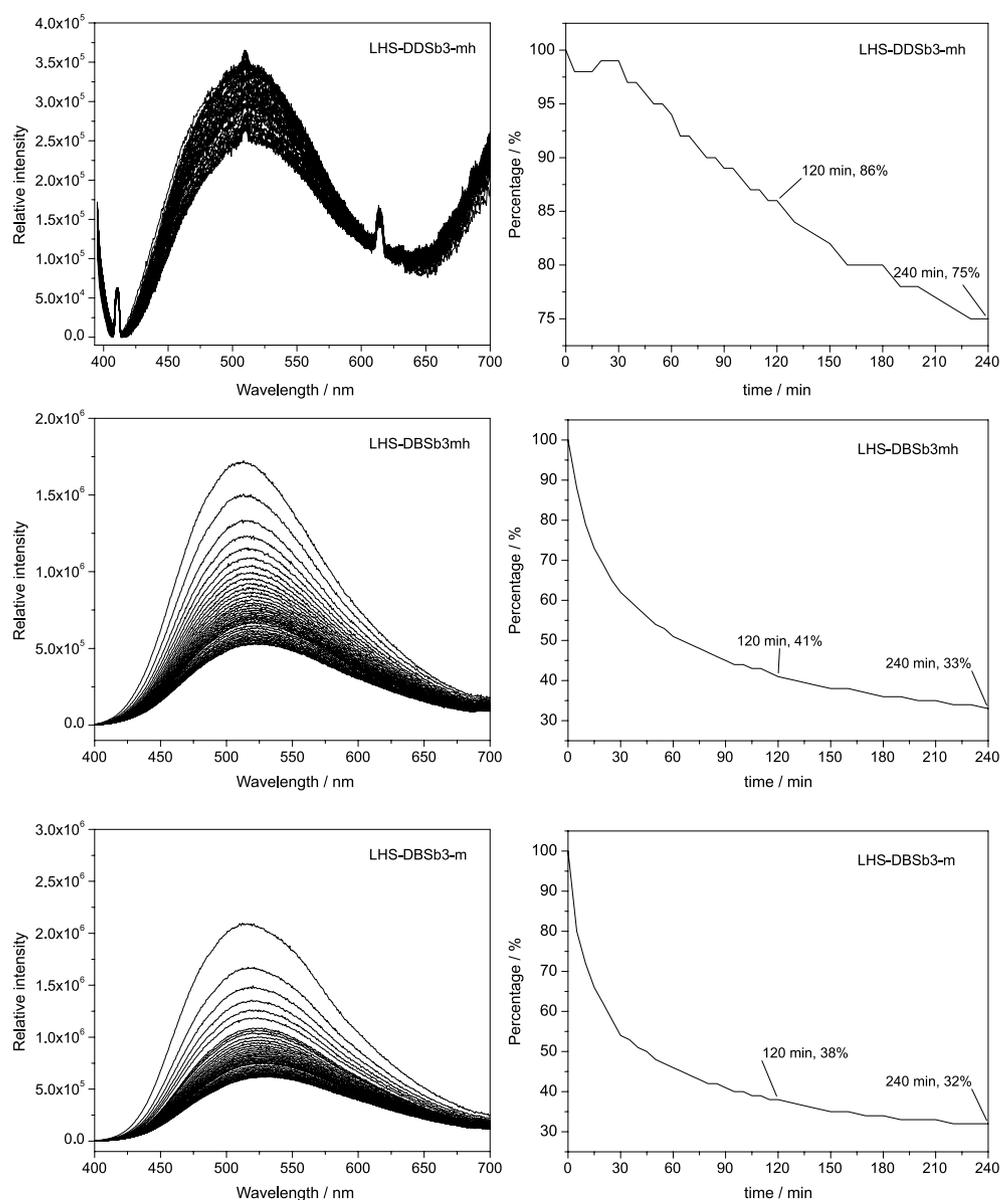


Figure S4. Emission spectra of the adsolubilization products (left panels) and change of the percentage of intensity as a function of time (right panels).

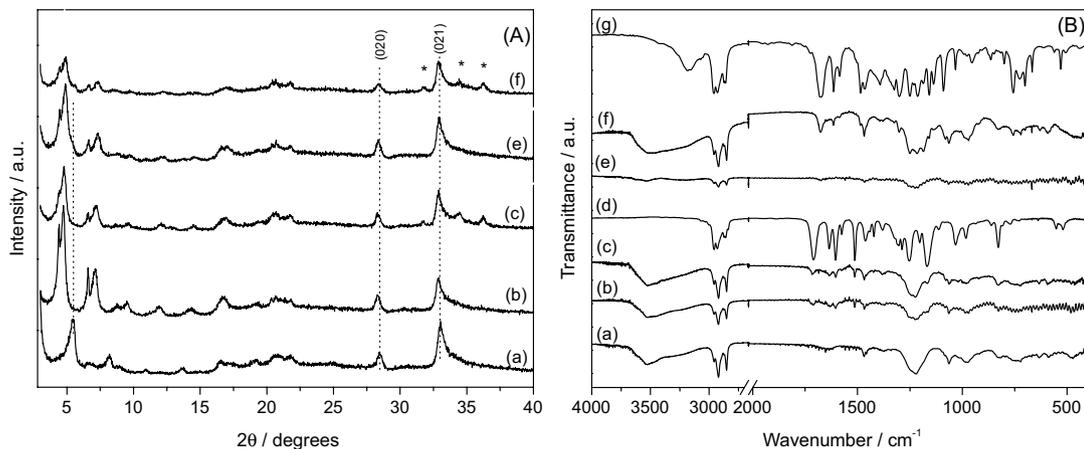


Figure S5. PXRD patterns (A) and FTIR spectra (B) of LHS/DDS before (a) and after adsolubilization: LHS/DDSehmc-r (b); LHS/DDSehmc-m (c); ehmc (d); LHS/DDSehs-r (e); LHS/DDSehs-m (f) and ehs (g). * = ZnO.

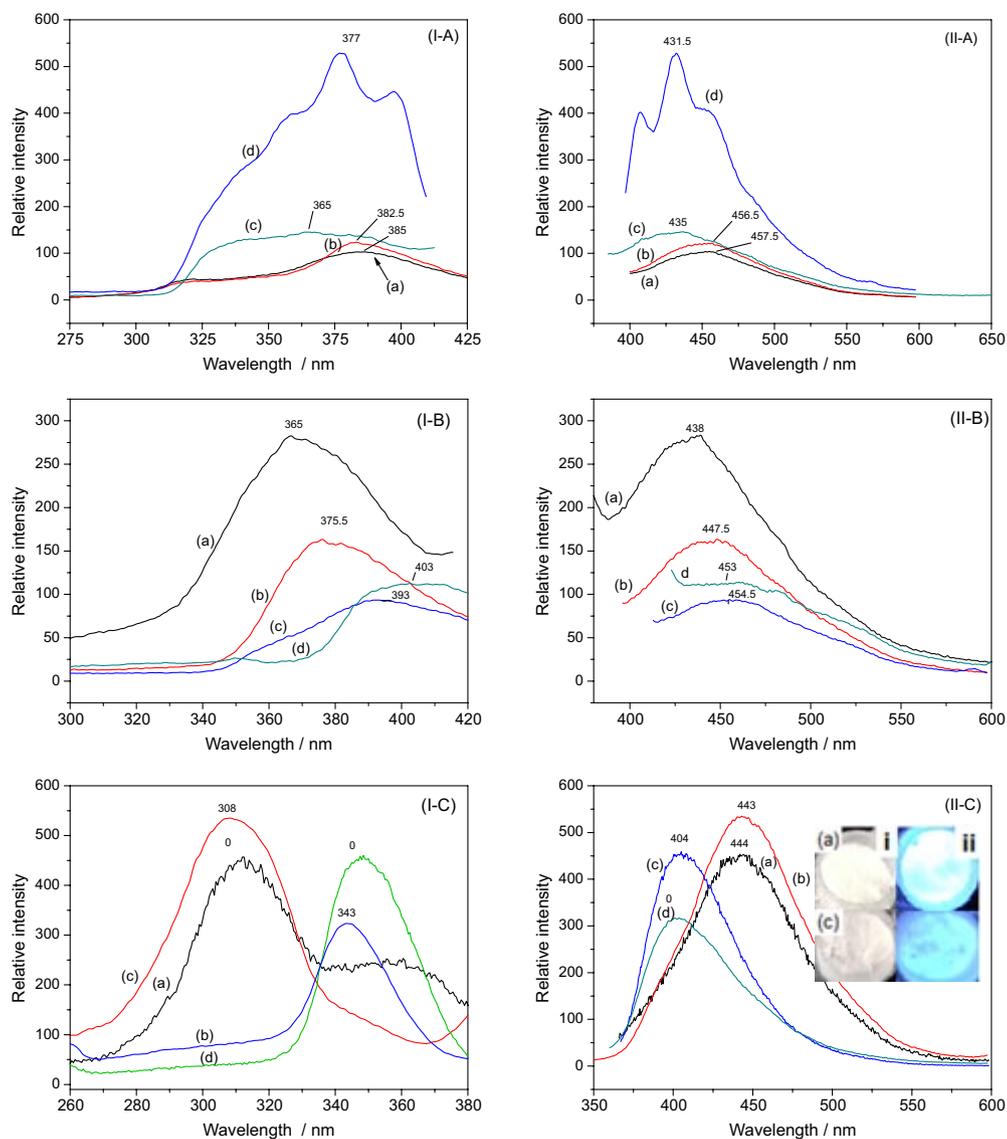


Figure S6. Excitation (Panel I) and emission spectra (Panel II) of LHS/S adsolubilized with ethyl cinnamate (A) [(a) LHS/DBSec-r; (b) LHS/DBSec-m; (c) LHS/DDSec-r; (d) LHS-DDSec-m], 2-ethylhexyl 4-methoxycinnamate (B) [(a) LHS/DBSehmc-r; (b) LHS/DBSehmc-m; (c) LHS/DDSemhc-r; (d) LHS/DDSehmc-m] and 2-ethylhexyl salicylate (C) [(a) LHS/DBSehs-r; (b) LHS/DBSehs-m; (c) LHS/DDSehs-r; (e) LHS/DDSehs-m]. Inset shows a photograph of LHS/DBSehs-r (a) and LHS/DDSehs-r (c) without (i) and under UV irradiation (365 nm) (ii).

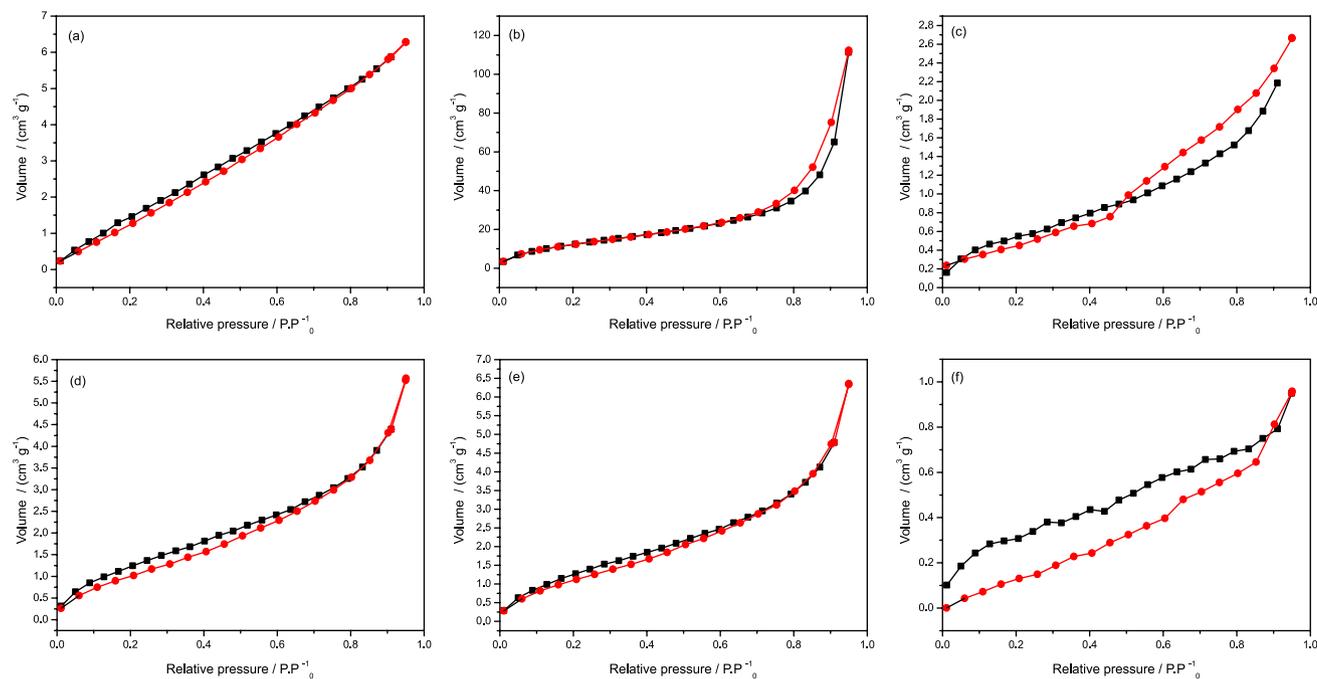


Figure S7. BET analysis of LHS/S samples before and after adsolubilization with benzophenone-3: LHS/DBS (a); LHS/DBSb3-mh (b); LHS/DBSb3-m (c); LHS/DDS (d); LHS/DDSb3-mh (e) and LHS/DBSb3-m (f).

Table S1. BET surface area, pore volume before and after adsolubilization with benzophenone-3

Sample	S_{BET}^a	R^b	S_t^c	R^d	V_p^e
LHS/DDS	5.05	0.9988	7.43	0.9999	8.54
LHS/DDSb3-mh	5.25	0.9983	8.18	0.9995	9.83
LHS/DDSb3-m	1.18	0.9981	1.45	0.9767	1.47
LHS/DBS	7.74	0.9813	13.35	0.9991	9.71
LHS/DBSb3-mh	48.31	0.9994	67.01	0.9992	172.18
LHS/DBSb3-m	1.82	0.9973	2.36	0.9791	3.51

^aTotal BET area ($\text{m}^2 \text{g}^{-1}$); ^bcorrelation coefficient BET; ^csurface area ($\text{m}^2 \text{g}^{-1}$); ^dcorrelation coefficient; ^epore volume ($10^{-3} \text{cm}^3 \text{g}^{-1}$).