

Nanohybrid Layered Double Hydroxides Used to Remove Several Dyes from Water

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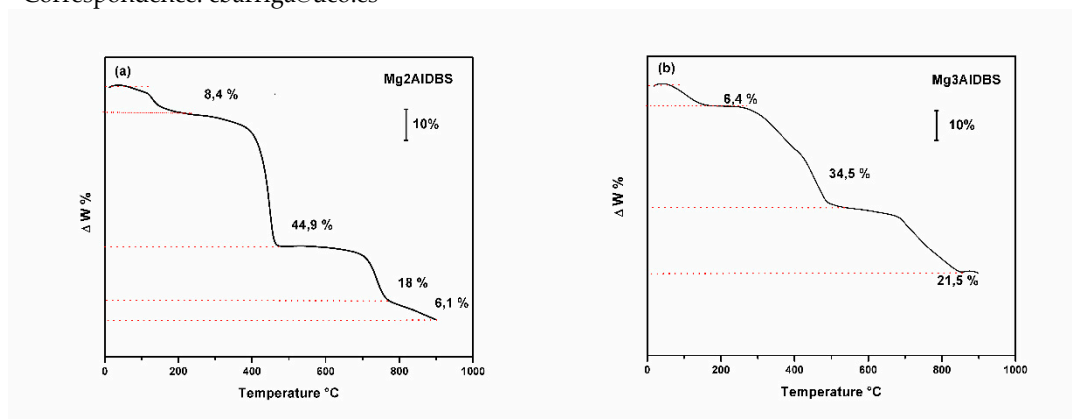


Figure S1. Thermogravimetric curves of the nanohybrid samples (a) Mg₂AIDBS and (b) Mg₃AIDBS.

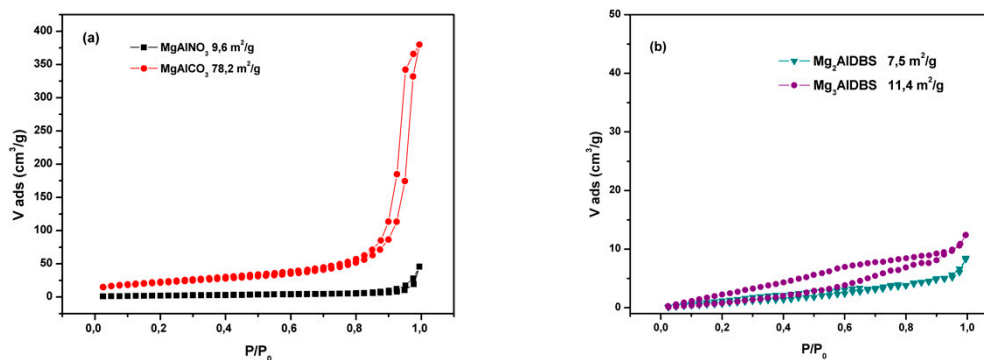


Figure S2. Adsorption-desorption isotherms of N₂ on the LDH samples (a) MgAlNO₃ and MgAlCO₃ and (b) Mg₂AIDBS and Mg₃AIDBS.

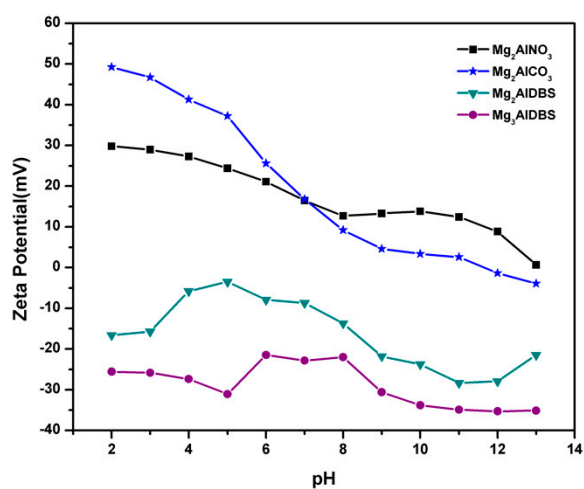


Figure S3. Zeta potential values obtained in a KCl solution (0,01 M) at pH between 2 and 12 of the adsorbents: MgAlNO₃, MgAlCO₃, Mg₂AlDBS and Mg₃AlDBS.

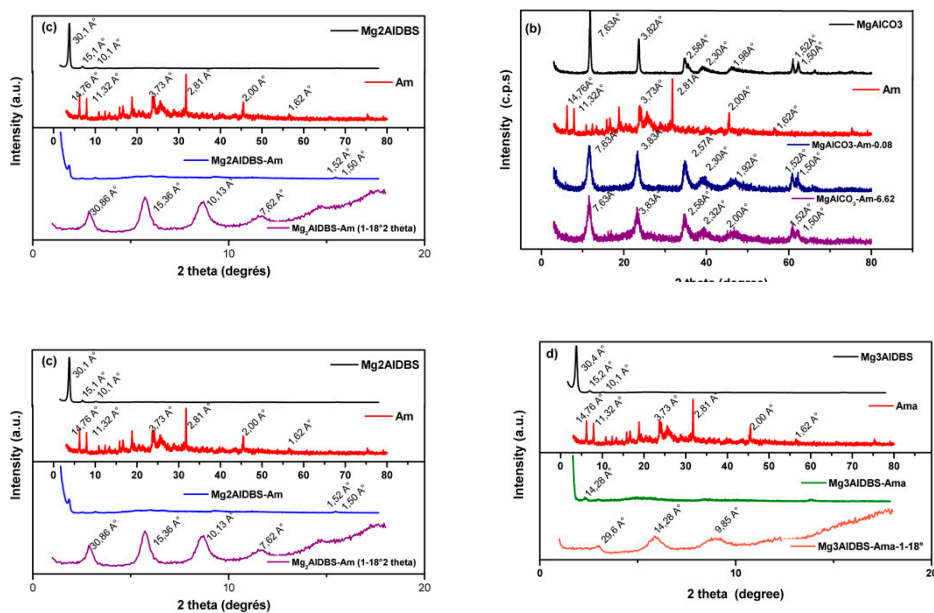


Figure S4. PXRD patterns of the Am adsorption products on the LDH samples: (a) MgAlNO₃, (b) MgAlCO₃, (c) Mg₂AlDBS and (d) Mg₃AlDBS.

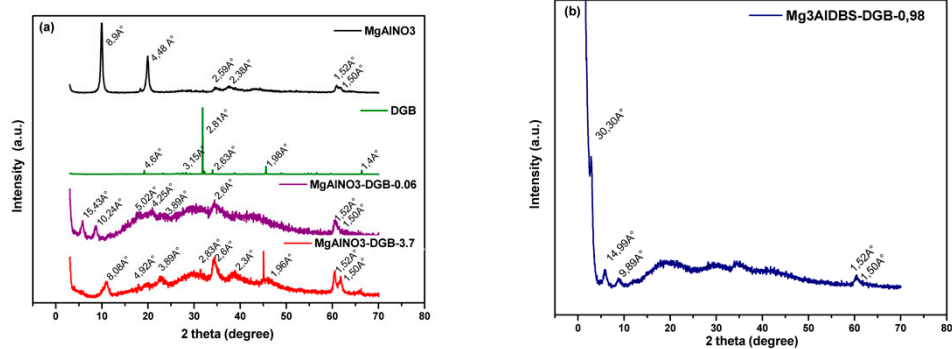


Figure S5. PXRD patterns of the DGB adsorption products on the LDH samples: (a) MgAlNO₃, and (b) Mg₃AlDDBS.

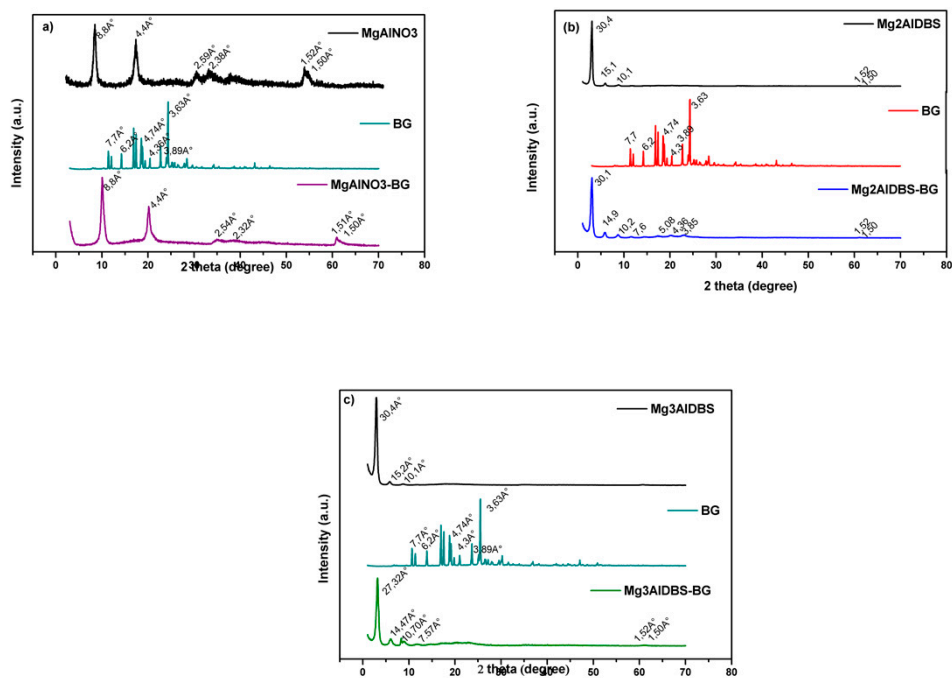


Figure S6. PXRD patterns of the BG adsorption products on the LDH samples: (a) MgAlNO₃, (b) Mg₂AlDDBS and (c) Mg₃AlDDBS.

Table S1. Values of the initial and final pH of the adsorption process and the percentage of Am and DBD dyes adsorbed by MgAlCO₃, MgAlNO₃, Mg₂AlDBS and Mg₃AlDBS. Co = 0.16 mmolL⁻¹ except for the Am adsorption experiment by MgAlNO₃ Co= 1.7 mmolL⁻¹, solid solution ratio = 1g/L.

Adsorbents	Amaranth			DGB		
	pH _i	pH _f	% adsorption	pH _i	pH _f	% adsorption
MgAlCO ₃	4	8.5	45	4	7.6	61
	7	8.2	40	8	8.1	73
	10	9.1	28	10	9.1	66
MgAlNO ₃	4	6.8	66	4	7.6	69
	7	7.1	64	8	7.6	92
	10	7.8	45	10	7.7	58
Mg ₂ AlDBS	4	7.8	59	4	7.9	47
	7	7.6	52	8	8.1	41
	10	9.2	30	10	9.1	21
Mg ₃ AlDBS	4	7.9	66	4	9	53
	7	7.9	50	8	9.3	40
	10	9.2	35	10	9.5	28