

Supplementary Information

Simultaneous Elimination of Dyes and Antibiotic with a Hydrothermally Generated NiAlTi Layered Double Hydroxide Adsorbent

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Table S1. XRD parameters:

h	k	l	2θ/deg	d-spacing/nm	Relative Intensity
0	0	3	11.44	0.773	156.41
0	0	6	23.25	0.382	79.21
0	0	9	39.59	0.227	56.07
1	1	0	25.08	0.355	47.15
1	0	0	35.00	0.256	80.66
1	0	1	37.89	0.238	35.76
0	1	8	47.09	0.193	52.64
1	1	3	62.48	0.185	40.19
1	0	<u>13</u>	75.17	0.126	28.57

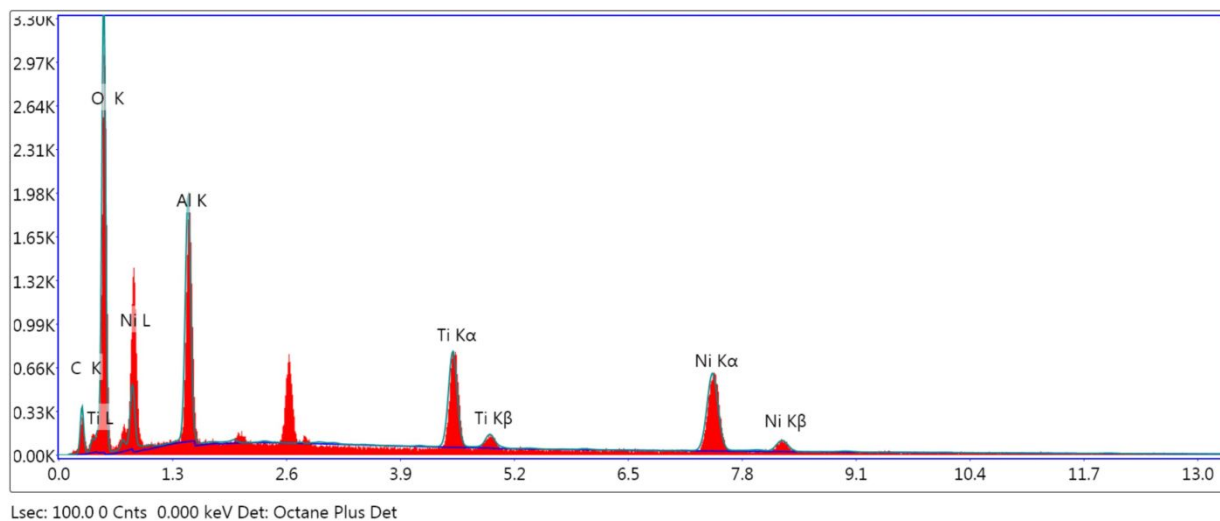


Figure S1. EDAX analysis of NiAlTi LDH.

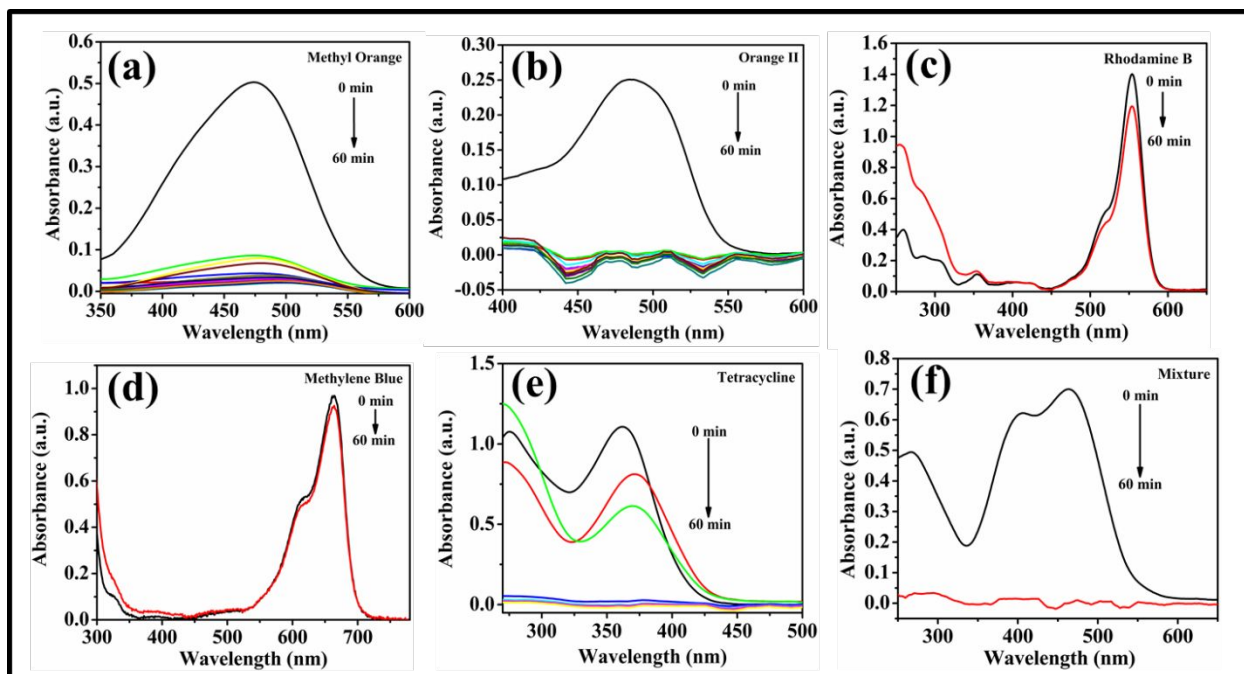


Figure S2. UV-visible spectra of time dependent adsorption of various dyes and antibiotic over NiAlTi LDH (Methyl orange (a), Orange II (b), Rhodamine B (c), Methylene Blue (d), Tetracycline (e) and mixture of Methyl orange and Tetracycline(f)).

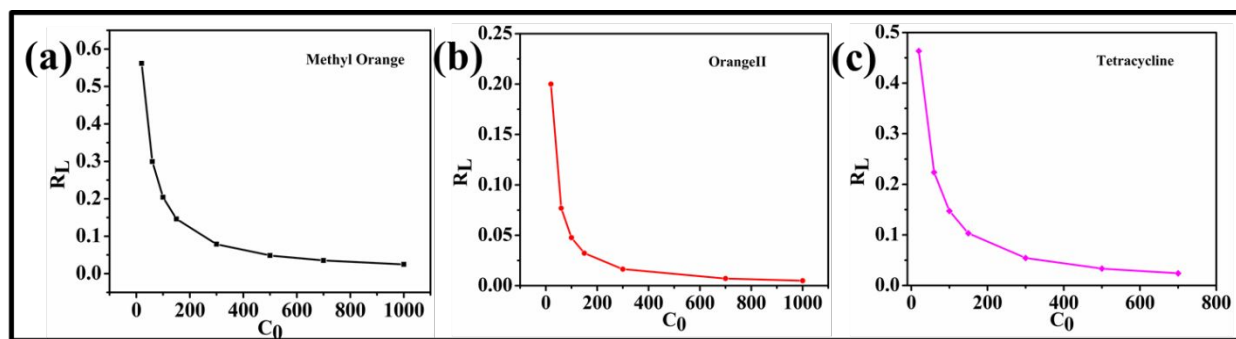
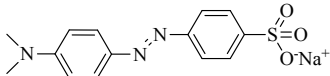
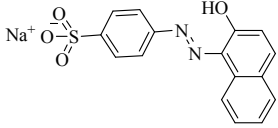
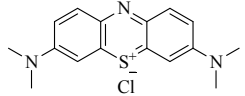
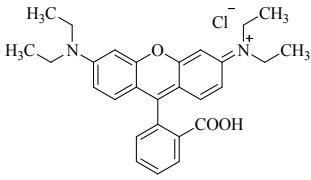
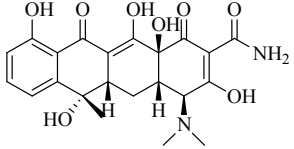


Figure S3. R_L v/s C_0 plot for adsorption of Methyl orange (a), Orange II (b) and Tetracycline (c) over NiAlTi LDH.

Table S2. Structures and properties of adsorbates tested:

Adsorbate	Structure	Nature	Molecular Formula	Molecular Mass (g/mol)
Methyl Orange		Anionic dye	$C_{14}H_{14}N_3NaO_3S$	327.34
Orange II		Anionic dye	$C_{16}H_{11}N_2NaO_4S$	350.324
Methylene Blue		Cationic dye	$C_{16}H_{18}ClN_3S$	319.85
Rhodamine B		Cationic dye	$C_{28}H_{31}ClN_2O_3$	479.02
Tetracycline		Antibiotic	$C_{22}H_{24}N_2O_8$	444.43