Moringa *oleifera* leave extract mediated synthesis of ZnO nanostructures for the enhanced photocatalytic oxidation of erythrosine.

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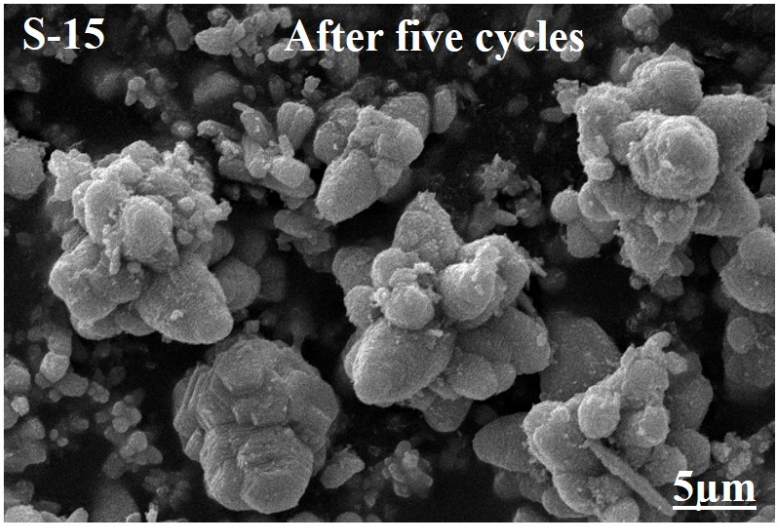

Figure (S1): SEM image of S-15 after cycling stability test

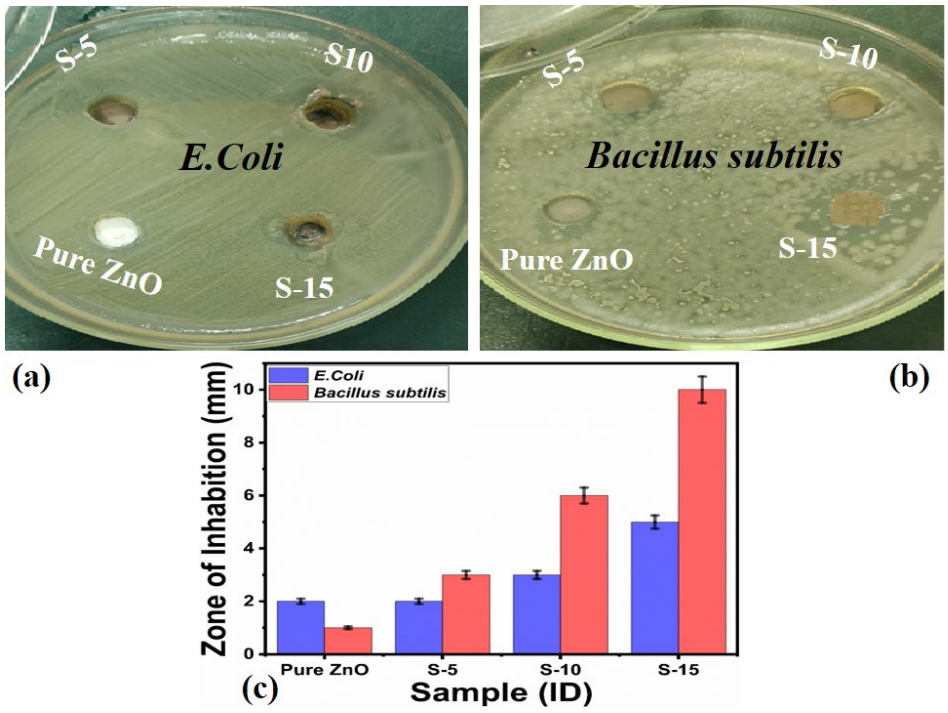

Figure (S2): (a, b) Antibacterial activity of pure ZnO and ZnO nanostructures synthesized with 5mL (S-5), 10mL(S-10) and 15 mL(S-15) of Moringa *oleifera* leaves extract respectively in E.Coli and their petri dish view with inhibition zone, (c) Corresponding measured inhibition zone in mm.

Table (S1): Comparative analysis of green assisted ZnO nanoparticles using sample 3 with pervious reported work

Photocatalyst	**Light source**	**Time (min)**	**Catalyst dose**	**Degradation (%)**	**Ref.**
ZnO NPs	UV-lamp	100	15 mg	99.8	Herein
ZnO	Hg-lamp 10 W	120	100 mg	90.0	63
Mn-ZnO	UV Lamp	90	24 mg	60.0	64
ZnO/AC	UV-lamp	45	0.25 g/L	92.2	65
Ag-ZnO	Solar radiation	30	100 mg	98.5	66
Ag-ZnO@GO	Xe-lamp 20 W	180	20 mg	85.0	67
ZnO/CuO	Solar radiation	120	0.5 g/L	93.0	68
ZnO/PNA	UV-lamp 250 W	120	200 mg	85.0	69
Cd-ZnS	Solar radiation	120	30 mg	96.7	70
CuO/ZnO/TiO_2	UV-light 6 W	180	100 mg	100	71
ZnO/GO	Xe-lamp 300 W	90	10 µg/mL	95.6	72
ZnO SCs	LED lamp 23 W	780	0.1 g	58.0	73
30%ZnO/Nylon	UV-light 15 w	300	0.01 g	58.3	74
CNDE2.0	A350 W xenon lamp	120	50 mg	90%	75

Photocatalyst	Light source	Time (min)	Catalyst dose	Degradation (%)	Ref.
Sample-3	Sun light	90	15mg	98	Herein