Supporting Information

Low Cost Graphene Oxide Modified Alumina Nanocomposite as Solar Light induced Photocatalyst

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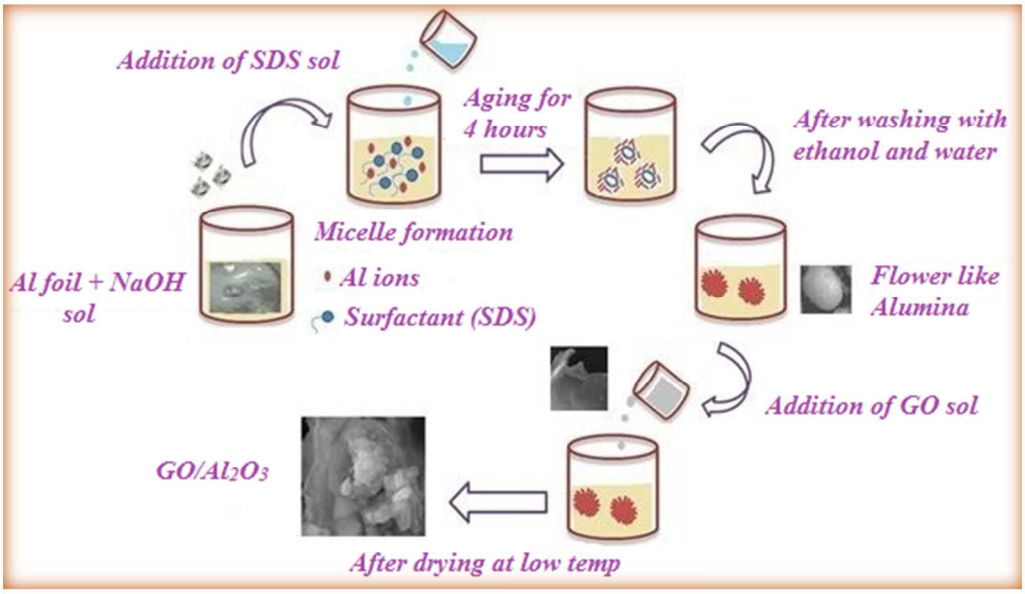
Table S1. Compositional analysis of various samples.

Elements	Al foil		Pure GO		Pure Al_2O_3		GO/Al_2O_3 nanocomposite	
	Wt %	**At %**	**Wt %**	**Wt %**	**Wt %**	**At %**	**Wt %**	**At %**
C K			58.4	65.2			37.5	48.9
O K			41.6	34.8	1.6	2.7	37.2	36.4
Al k	100	100			98.4	97.3	25.3	14.7
Total	100	100	100	100	100	100	100	100

Table S2. Reaction rate constants of various photocatalyst for the decomposition of organics.

Samples	**K_{app} values for MB under UV light**	**K_{app} values for MB under sunlight**	**K_{app}values for BA under sunlight**
Pure Al_2O_3	0.0001	0.0006	0.0003
GO	0.0380	0.0380	0.0020
5.0 % GO/Al_2O_3	0.0060	0.0070	0.0050
10.0 % GO/Al_2O_3	0.0040	0.0190	0.0056
15.0 % GO/Al_2O_3	0.0030	0.0250	0.0080



Scheme S1. Proposed mechanism for the synthesis of GO/Al_2O_3 composite.