Supporting Information

For

Improved Visible Light-Driven Photocatalytic Degradation of an Industrial Dye Acid Orange-7 using Metal-free Sulfur Doped Graphitic Carbon Nitride

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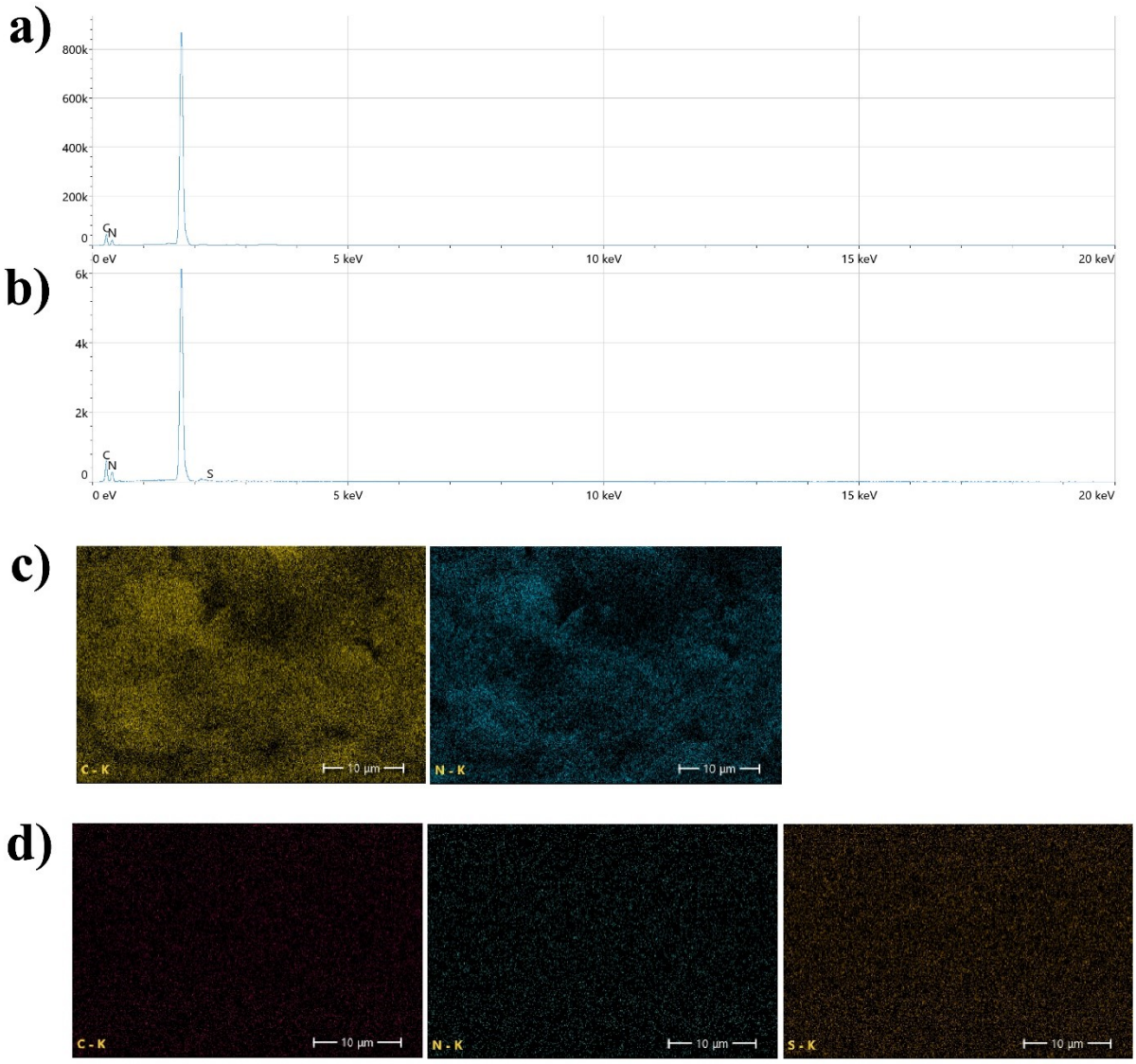

Fig. S1 EDX spectra and elemental mapping and of GCN (a,c) and SGCN (b,d) photocatalytic materials.

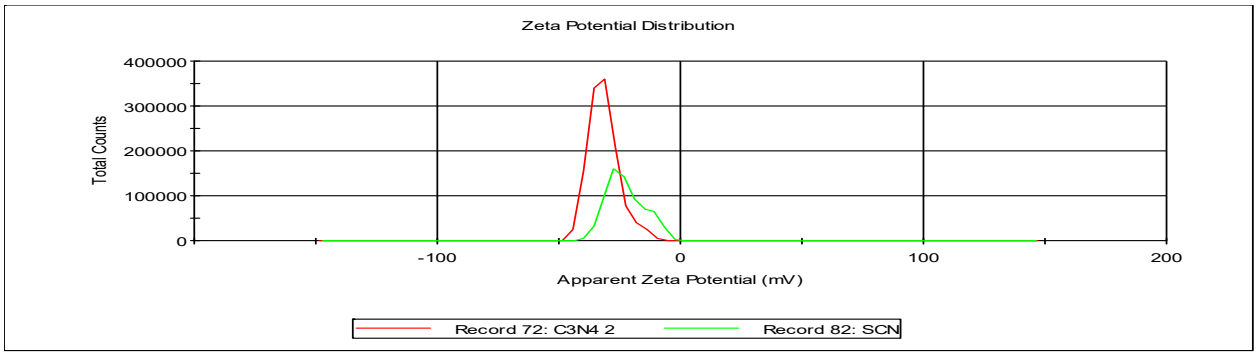

Fig. S2. Zeta potential distribution (mV) of pristine GCN and doped SGCN photocatalytic materials

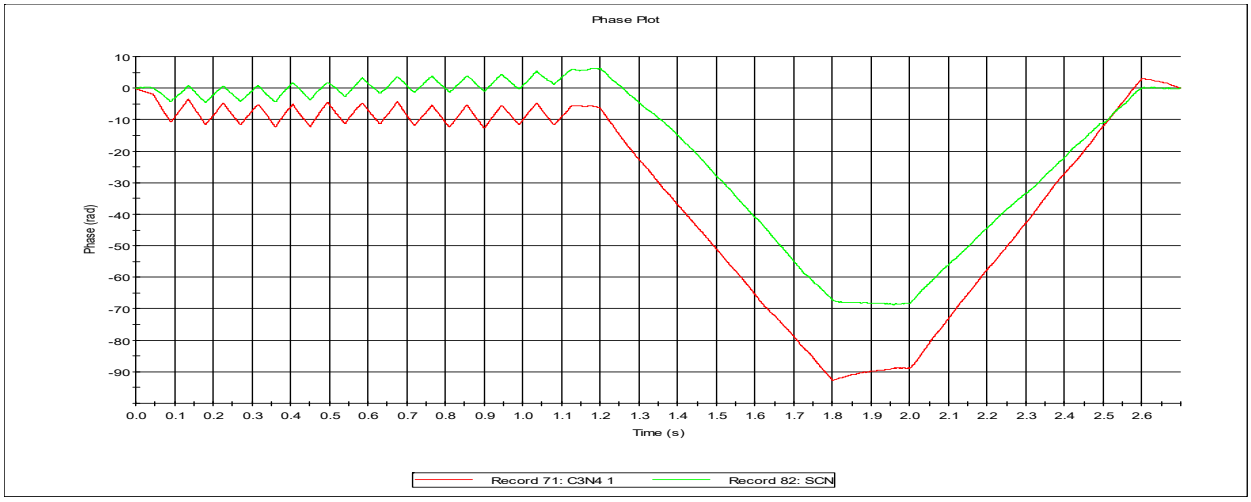

Fig. S3 The phase plot (Phase = Frequency x Time) shows the difference in phase between GCN and SGCN

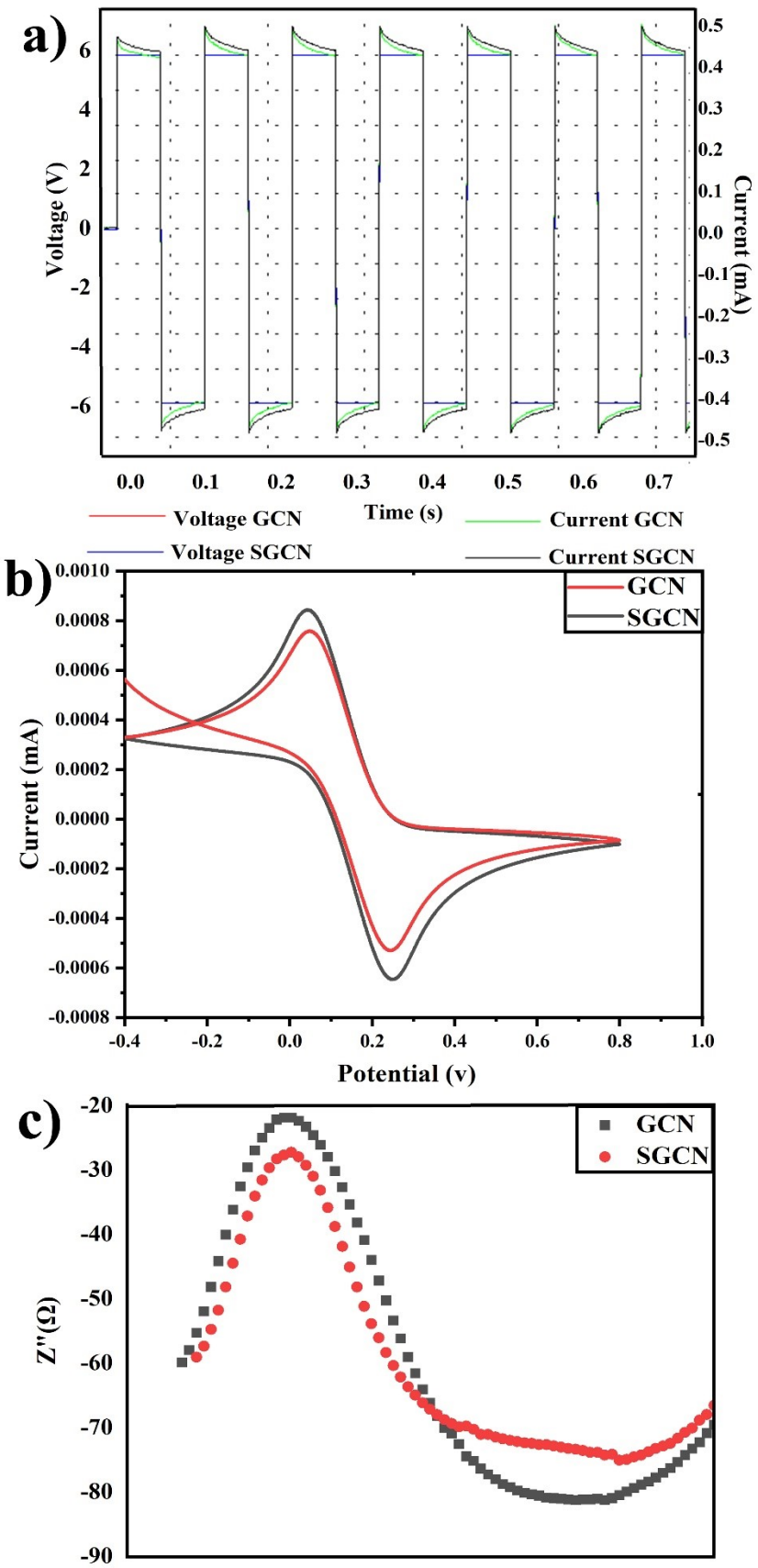

Fig. S4 a) Voltage and current graph b) Cyclic voltammetry (CV) response c)Electrochemical impedance spectroscopy (EIS)of GCN and SGCN photocatalytic materials.

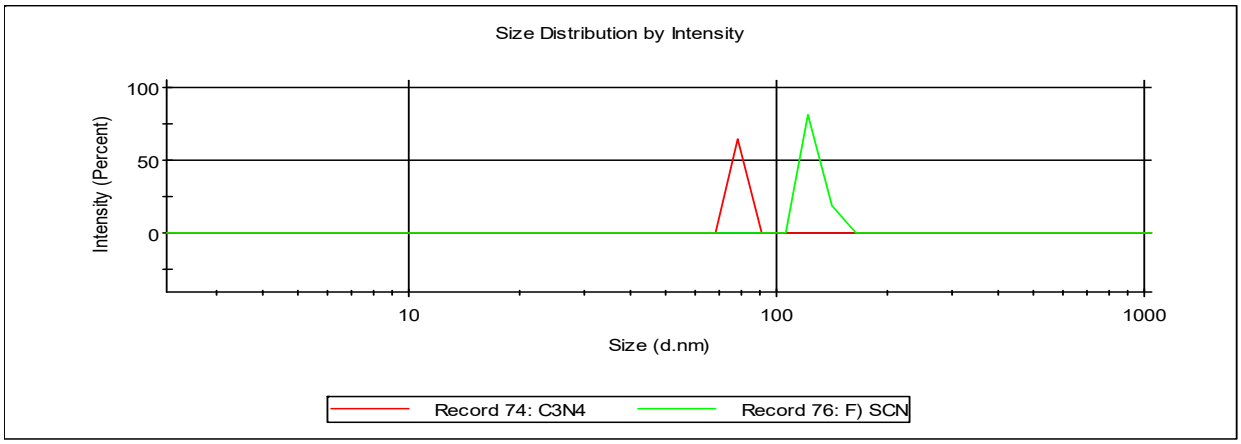

Fig. S5 Average hydrodynamics size of GCN and SGCN photocatalytic materials.

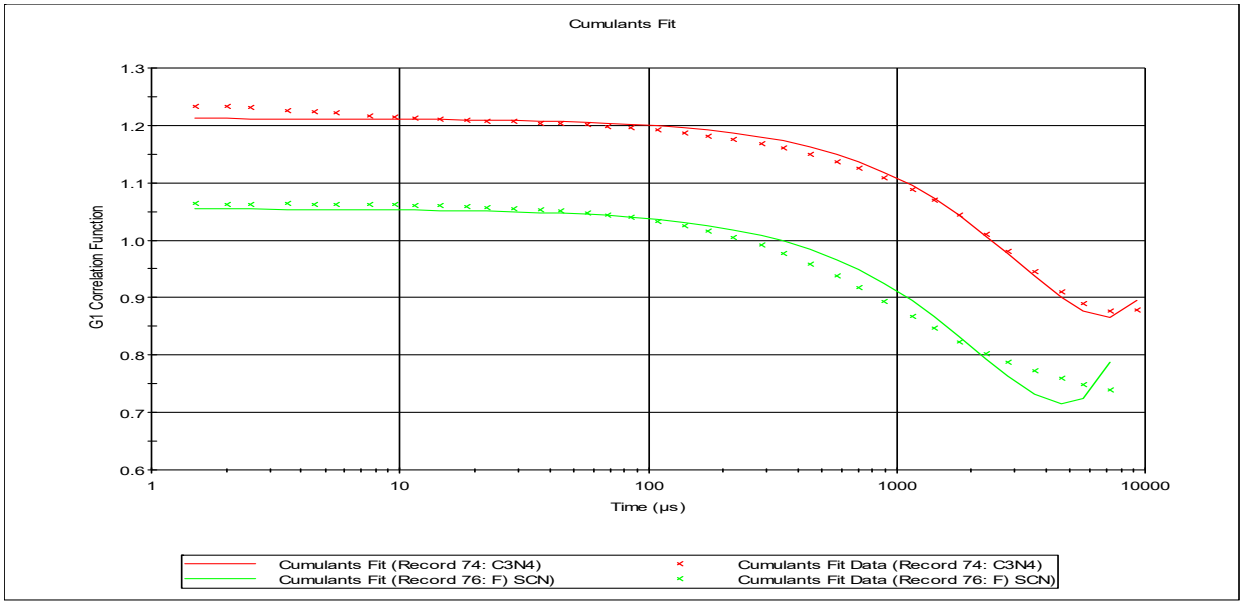

Fig. S6 The G1 correlation function of the GCN and SGCN over the different duration of time (sedimentation over time)

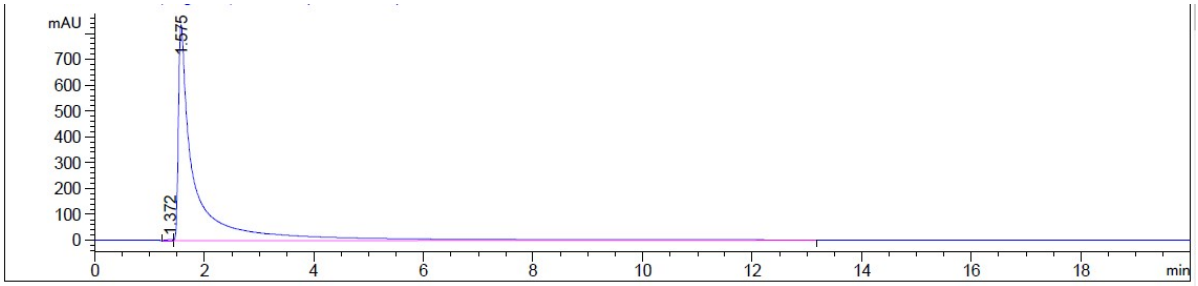

Fig. S7 HPLC chromatogram of the AO-7 without using the photocatalyst (before degradation)

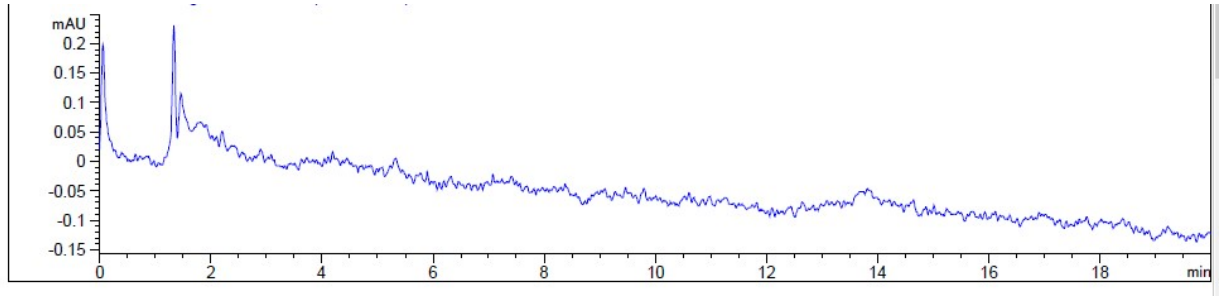

Fig. S8 HPLC chromatogram of the AO-7 using the SGCN photocatalyst after degradation

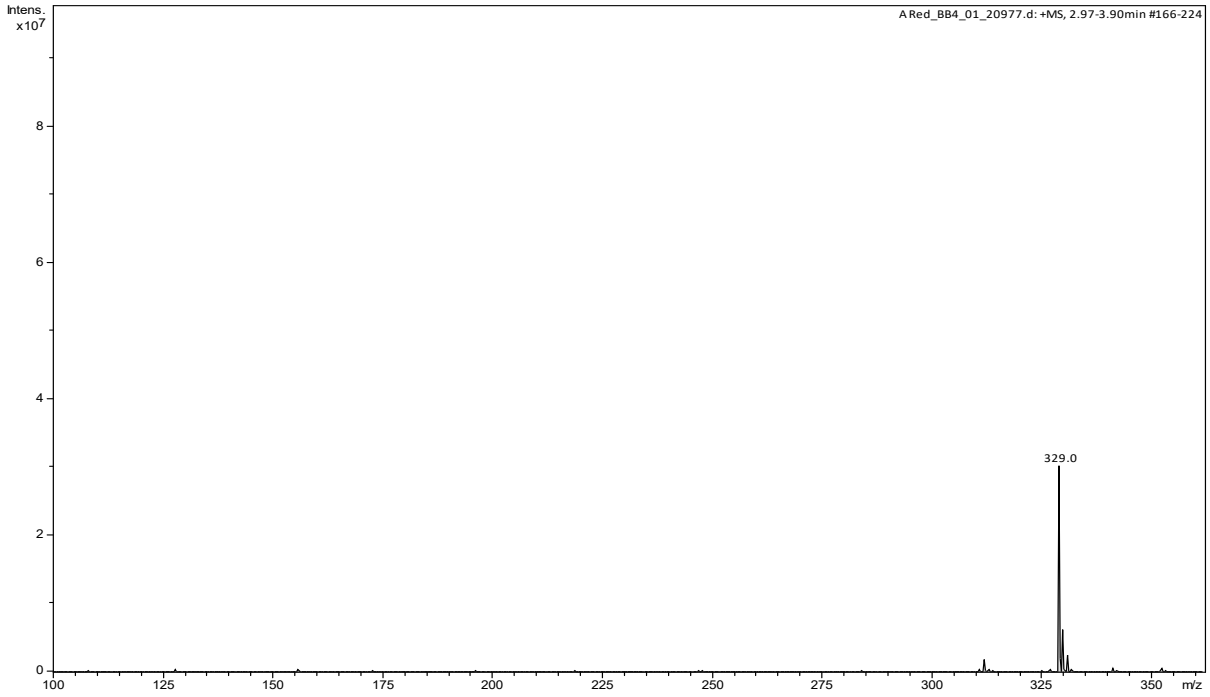

Fig. S9 LC-MS chromatogram of AO-7 dyes (m/z) before the degradation

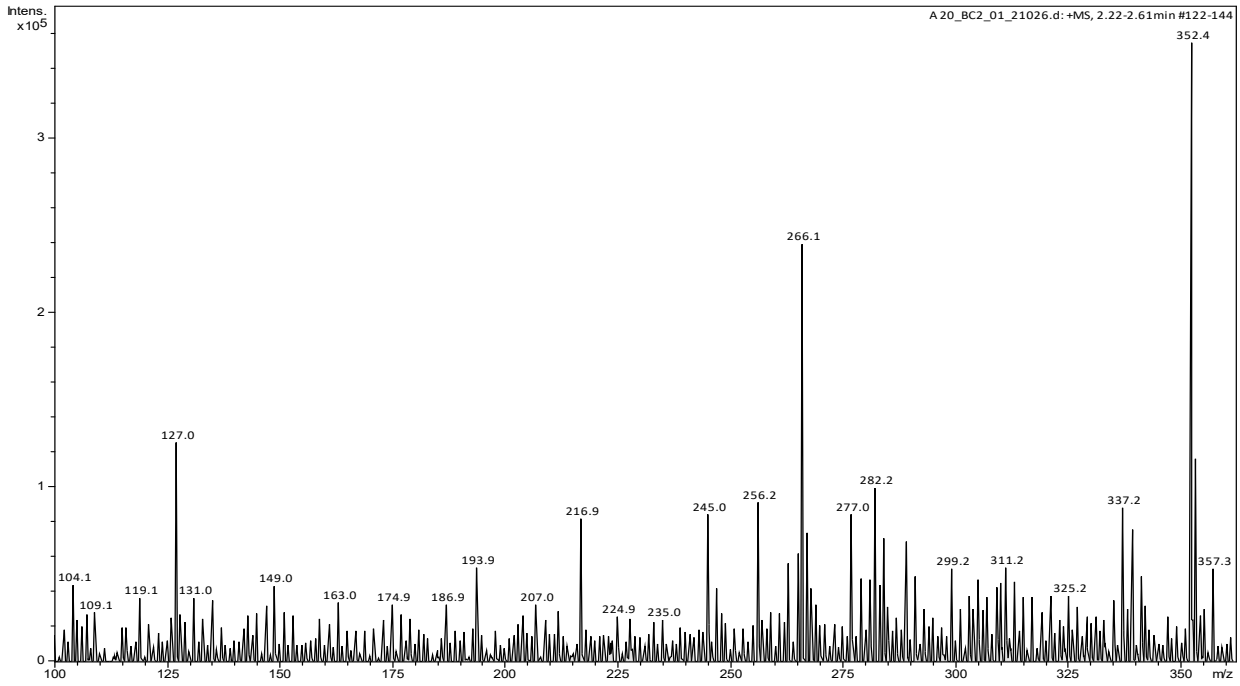

Fig. S10 LC-MS chromatogram of AO-7 dyes (m/z) using SGCN after 28 minutes' irradiation with visible light

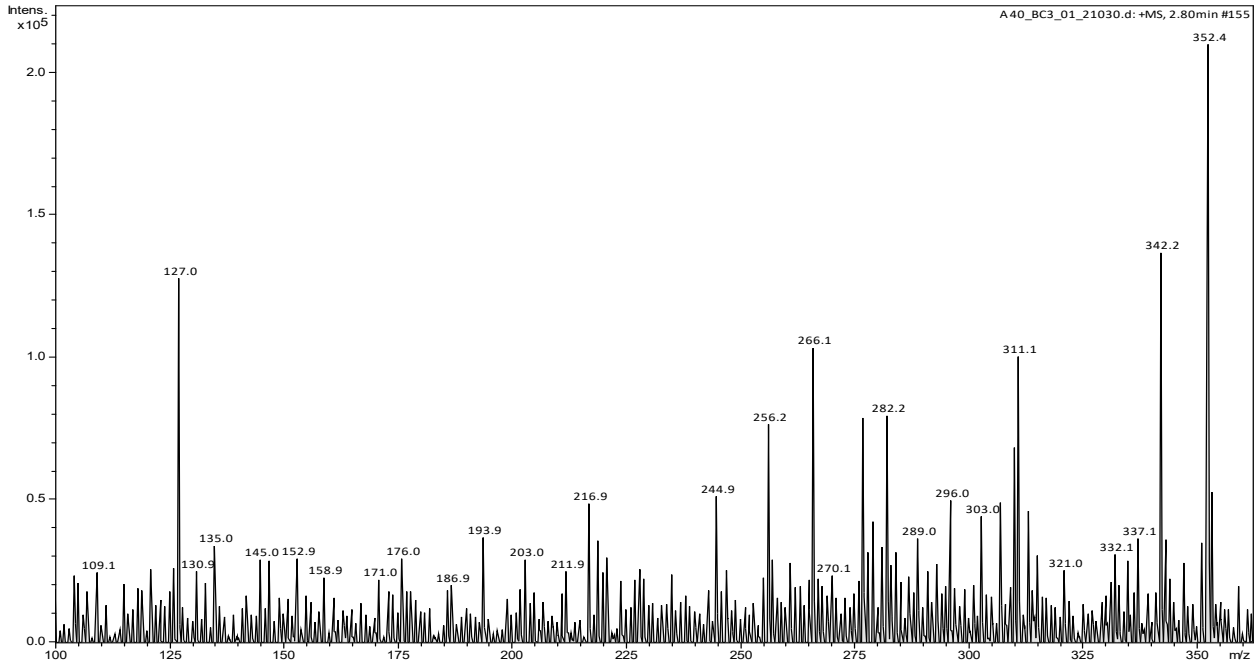

Fig. S11 LC-MS chromatogram of AO-7 dyes (m/z) using SGCN after 42 minutes' irradiation with visible light

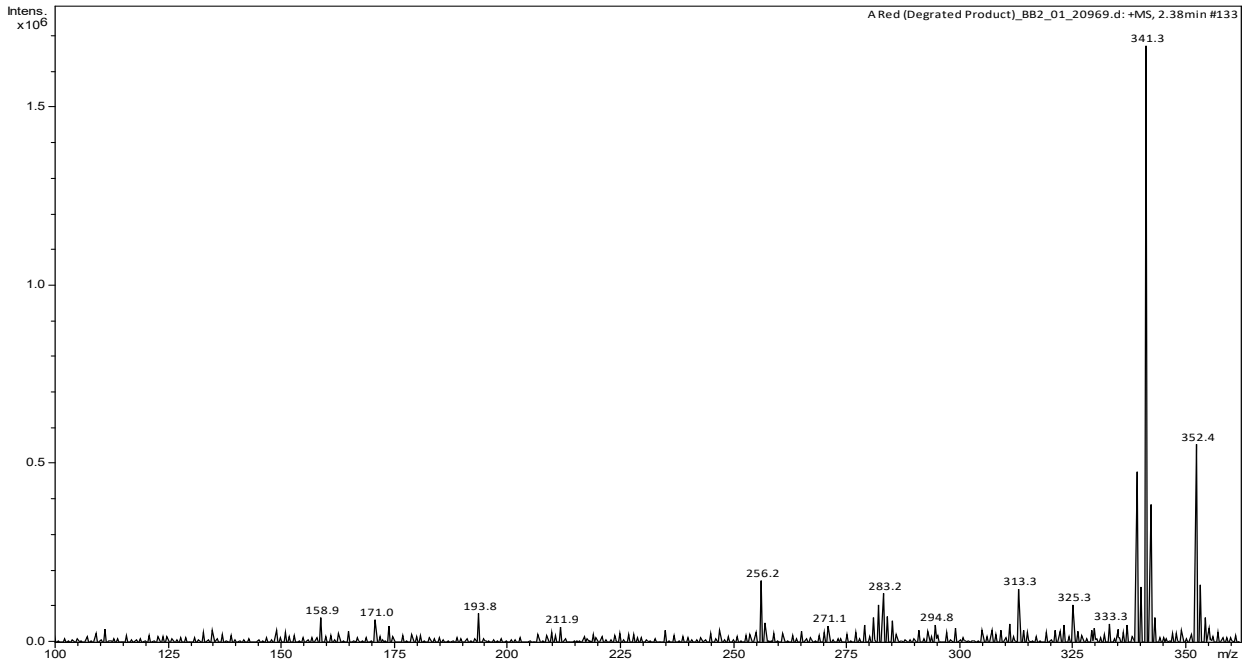

Fig. S12 LC-MS chromatogram of AO-7 dyes (m/z) using SGCN after 56 minutes' irradiation with visible light