Supporting information:

Photochemical aging of atmospherically reactive organic compounds involving brown carbon at the air-aqueous interface
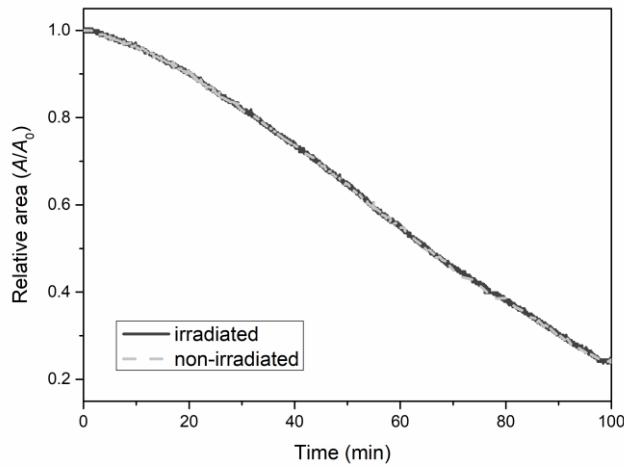
Figure S1: Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DOPC monolayers on artificial seawater. A_0 is the molecular area of monolayer at 25 mN/m.
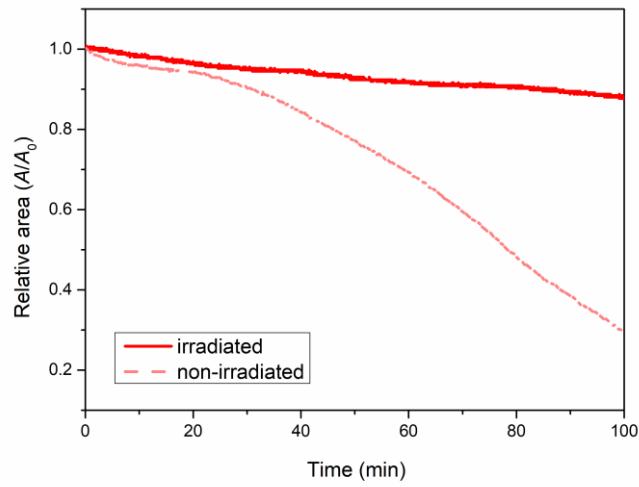
Figure S2: Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DOPC monolayers on artificial seawater containing IC. A_0 is the molecular area of monolayer at 25 mN/m.
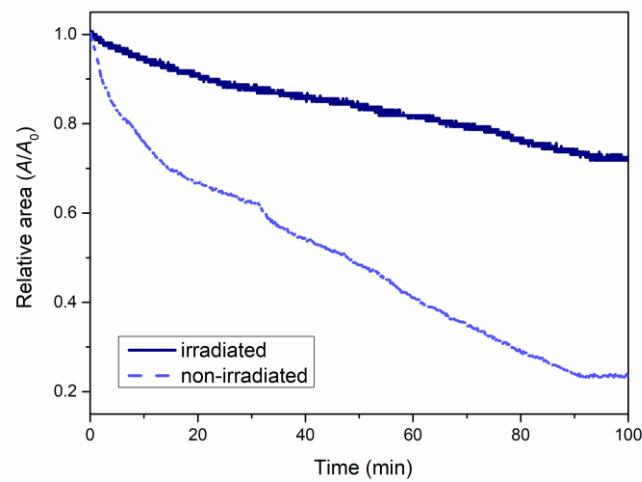
Figure S3: Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DOPC monolayers on artificial seawater containing HA. A_0 is the molecular area of monolayer at 25 mN/m.
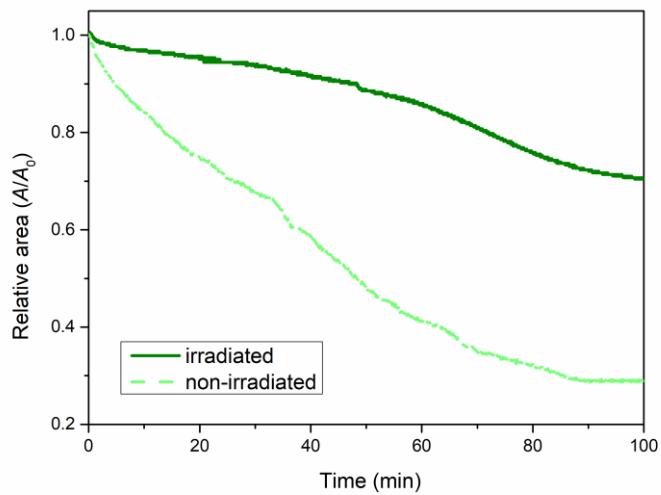
Figure S4: Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DOPC monolayers on artificial seawater containing SOA sample. A_0 is the molecular area of monolayer at 25 mN/m.
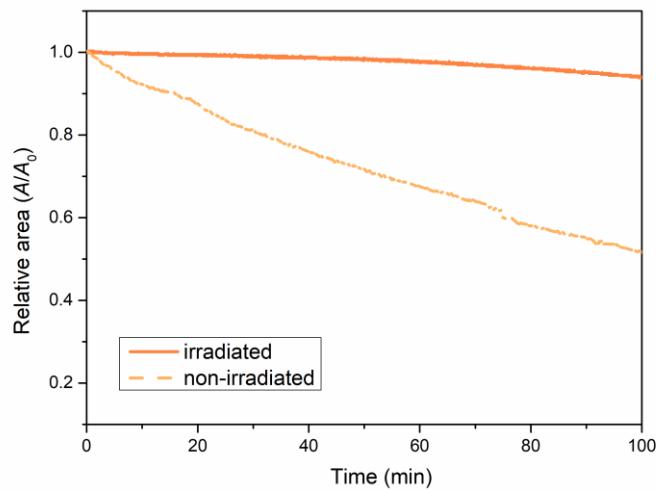
Figure S5. Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DOPC monolayers on artificial seawater containing $PM_{2.5}$ sample. A_0 is the molecular area of monolayer at 25 mN/m.
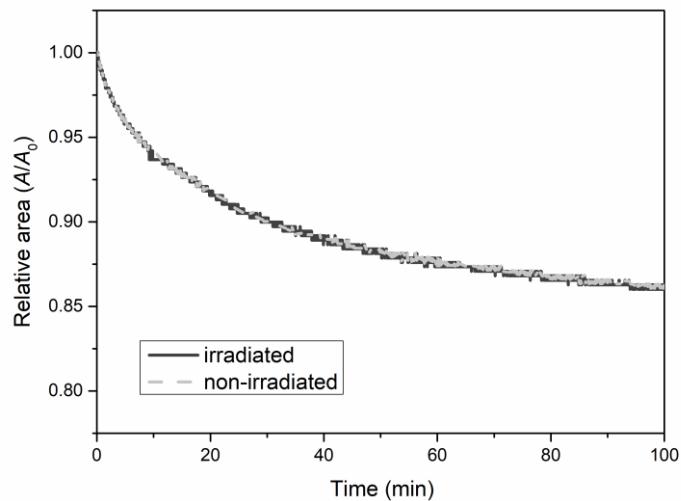
Figure S6: Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DSPC monolayers on artificial seawater. A_0 is the molecular area of monolayer at 25 mN/m.
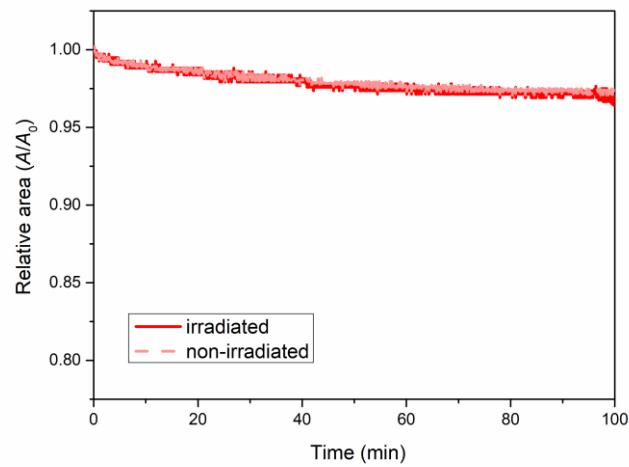
Figure S7: Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DSPC monolayers on artificial seawater containing IC. A_0 is the molecular area of monolayer at 25 mN/m.
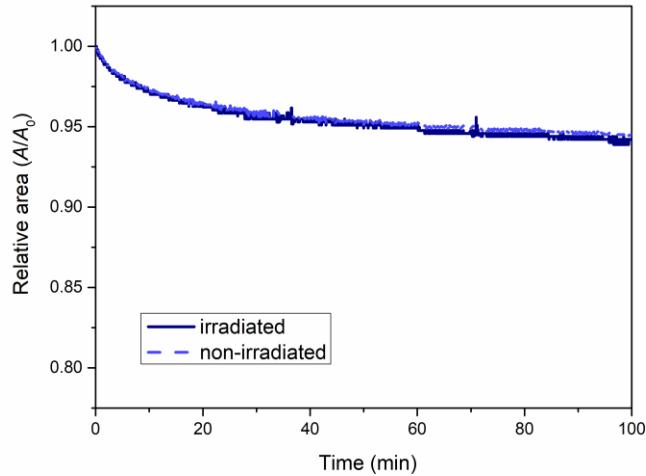
Figure S8: Relative area (A/A_0) relaxation curve of irradiated and non-irradiated DOPC monolayers on artificial seawater containing HA. A_0 is the molecular area of monolayer at 25 mN/m.