FIG. S1

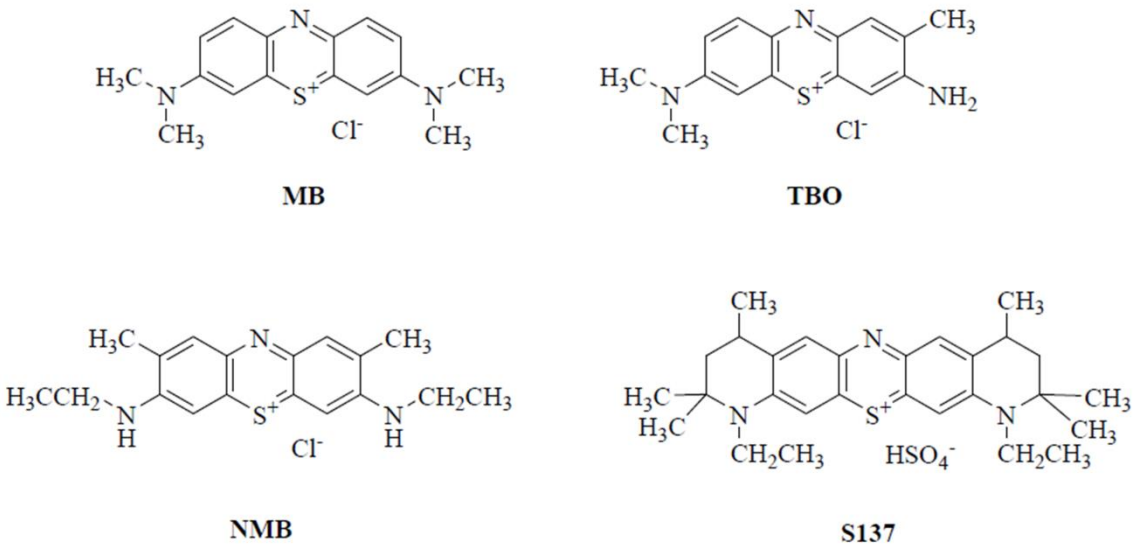

FIG S1 Chemical structures of the photosensitizers used in the study.

FIG. S2

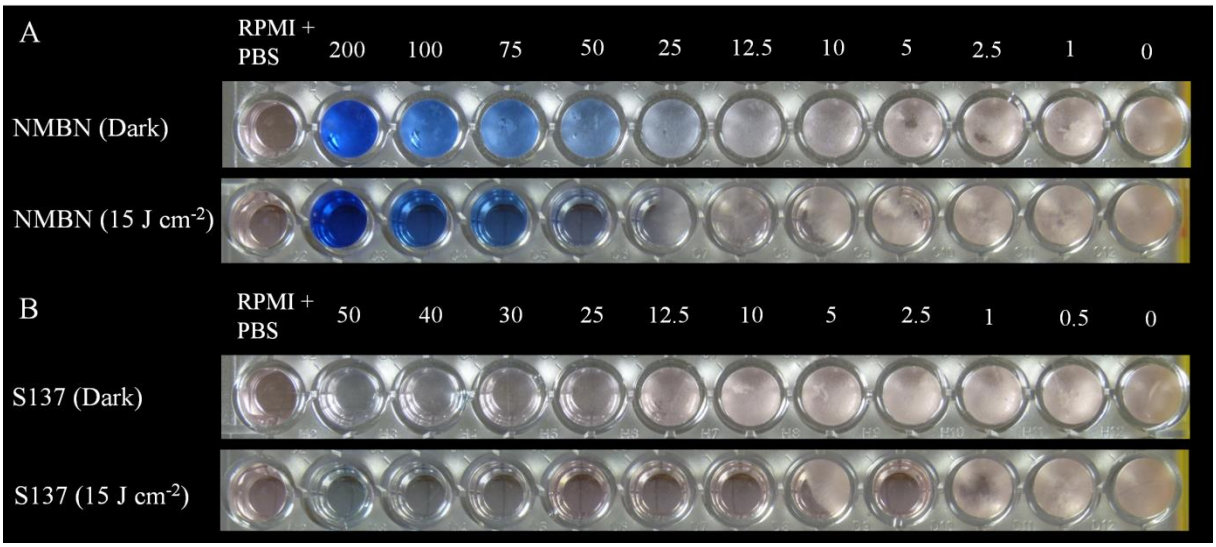

FIG S2 MIC-based experiments with (A) NMBN or (B) S137. Fifty µl of the conidial suspension and 50 µl of the PS solution were added to each well. The final concentration of the conidia in the mixture was 4×10^4 cells ml^{-1}, the final concentrations of NMBN were 0, 1, 2.5, 5, 10, 12.5, 25, 50, 75, 100, and 200 µM and the final concentrations of S137 were 0, 0.5, 1, 2.5, 5, 10, 12.5, 25, 30, 40, 50 and 75 µM. Plates were held in the dark for 30 min at 28°C and exposed to fluence of 15 J cm^{-2} using the LED array as light source or alternatively kept in the dark to provide dark controls. After the exposures, 100 µl of RPMI (two-fold concentrate) were added to each well and plates were incubated at 28°C for 96 h.

FIG. S3

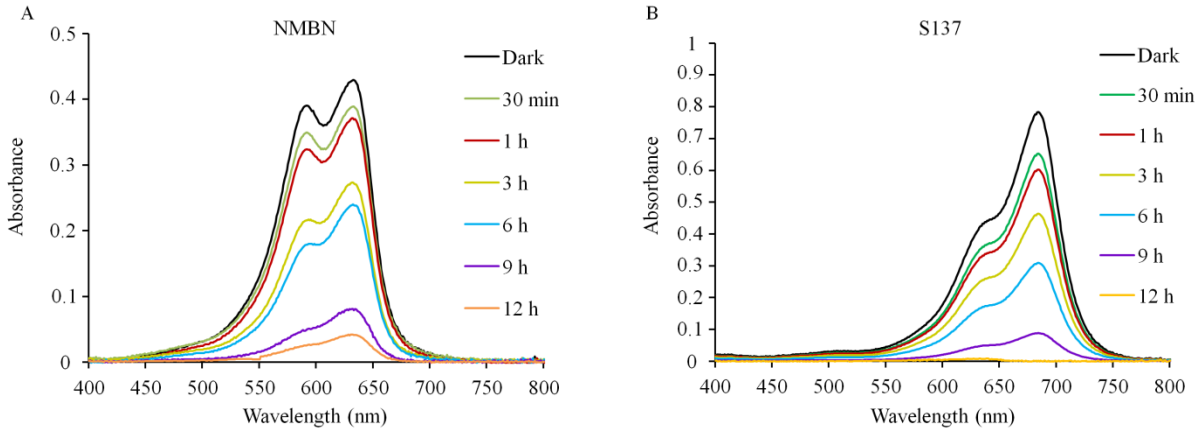

FIG S3 Visible absorption spectra of (A) NMBN (10 μM) and (B) S137 (10 μM) after exposures to full-spectrum solar radiation.

FIG. S4

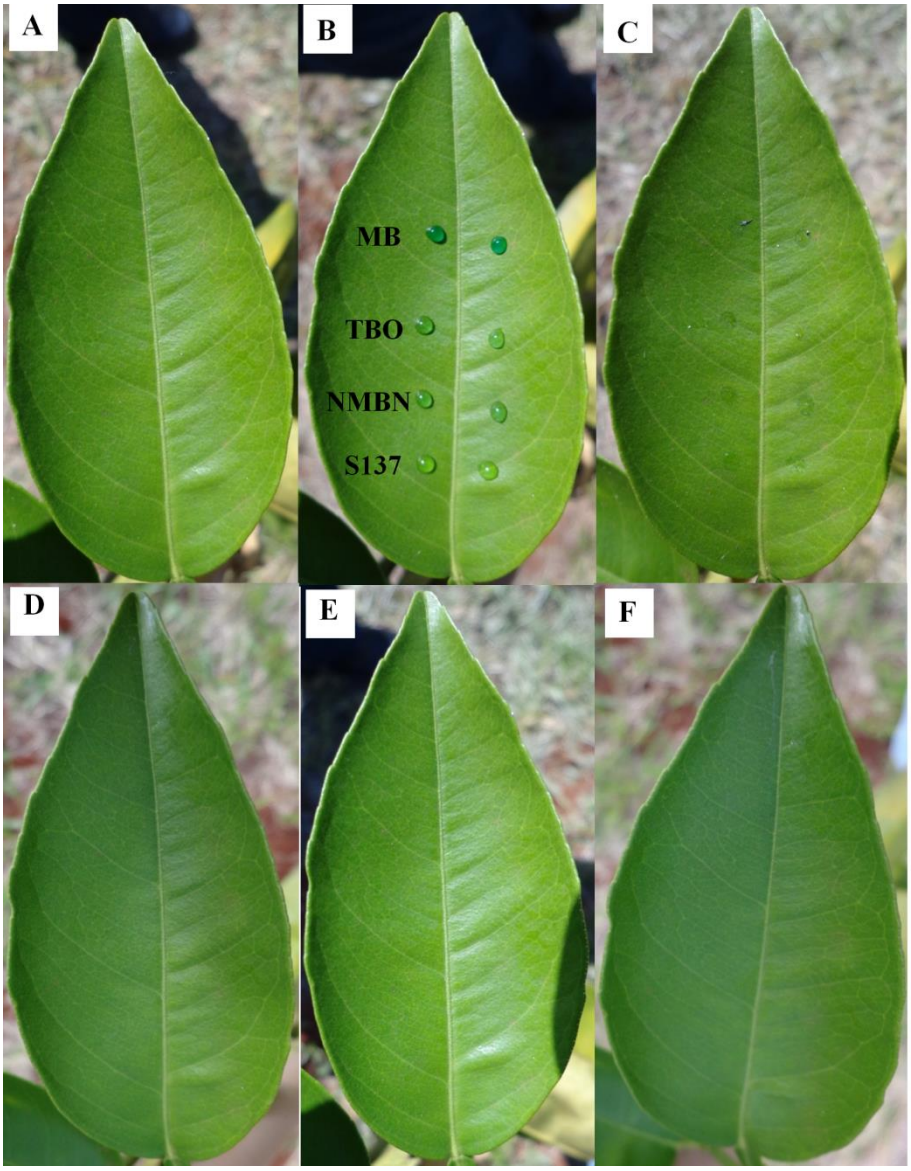

FIG S4 Photodynamic treatment of sweet orange (*Citrus sinensis*) leaves with photosensitizers MB, TBO, NMBN and S137. PS were spotted (5 µM) on the adaxial surface before plants have been exposed to natural solar radiation regimen. Leaves were photographed (A) before treatment, (B) immediately after, (C) two hours after, (D) 3 days after, (E) one week after and (F) three weeks after treatments.

FIG. S5

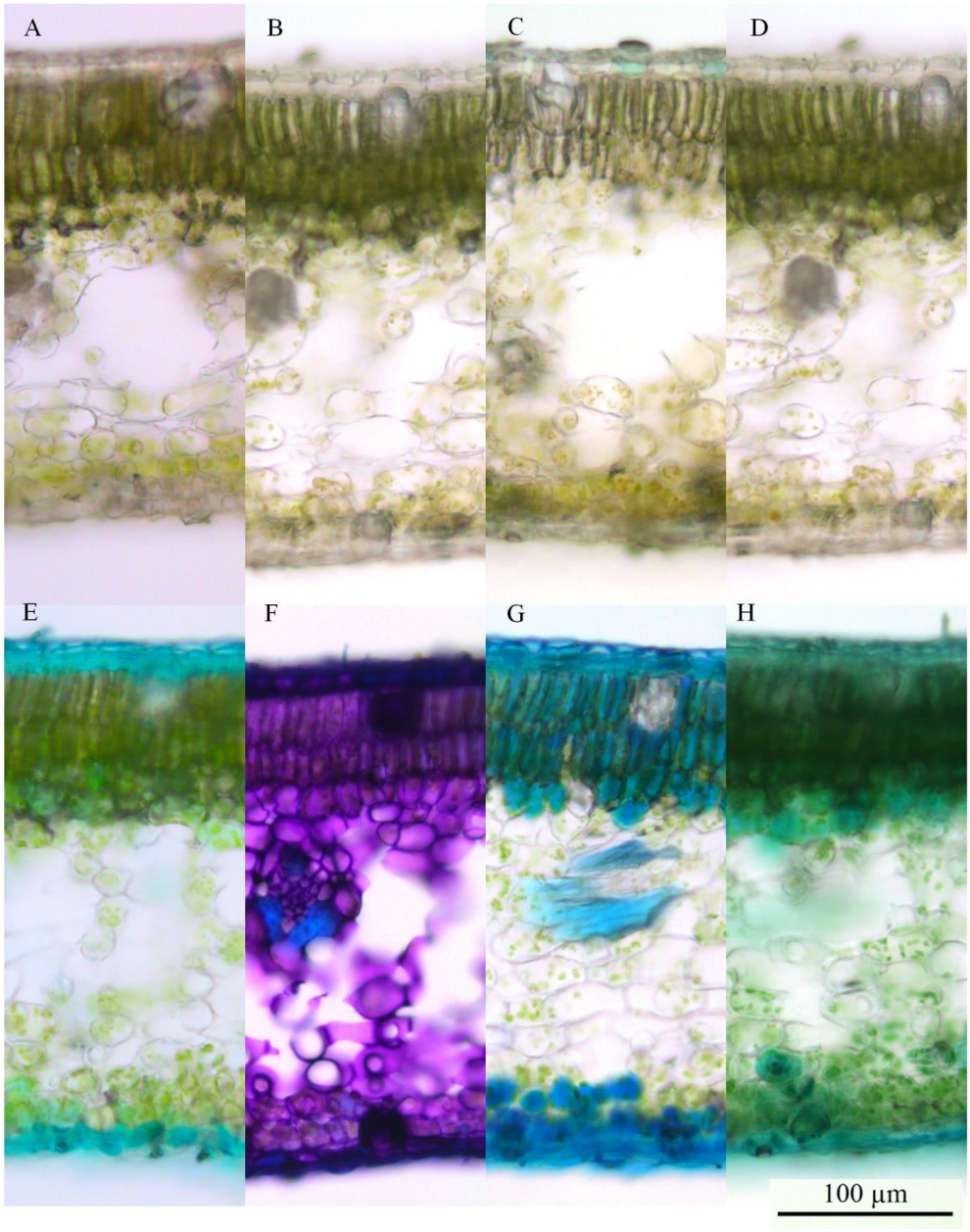

FIG S5 Cross sections of sweet orange tree leaves spotted (10 µL, 100 µM) with (A) MB, (B) TBO, (C) NMBN and (D) S137. The PS were spotted on the adaxial surface and leaves were sectioned at the spotted area after the drying of the PS. Cross sections of orange tree leaves treated (100 µM) with (E) MB, (F) TBO, (G) NMBN and (H) S137. Leaves were sectioned and treated with the PS solutions.

FIG. S6

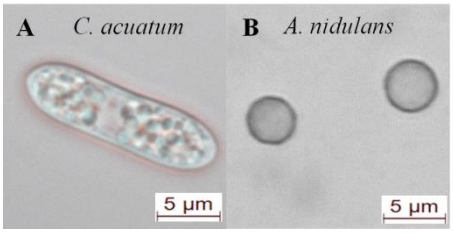

FIG S6 Conidia of (A) *Colletotrichum acutatum* and (B) *Aspergillus nidulans*.