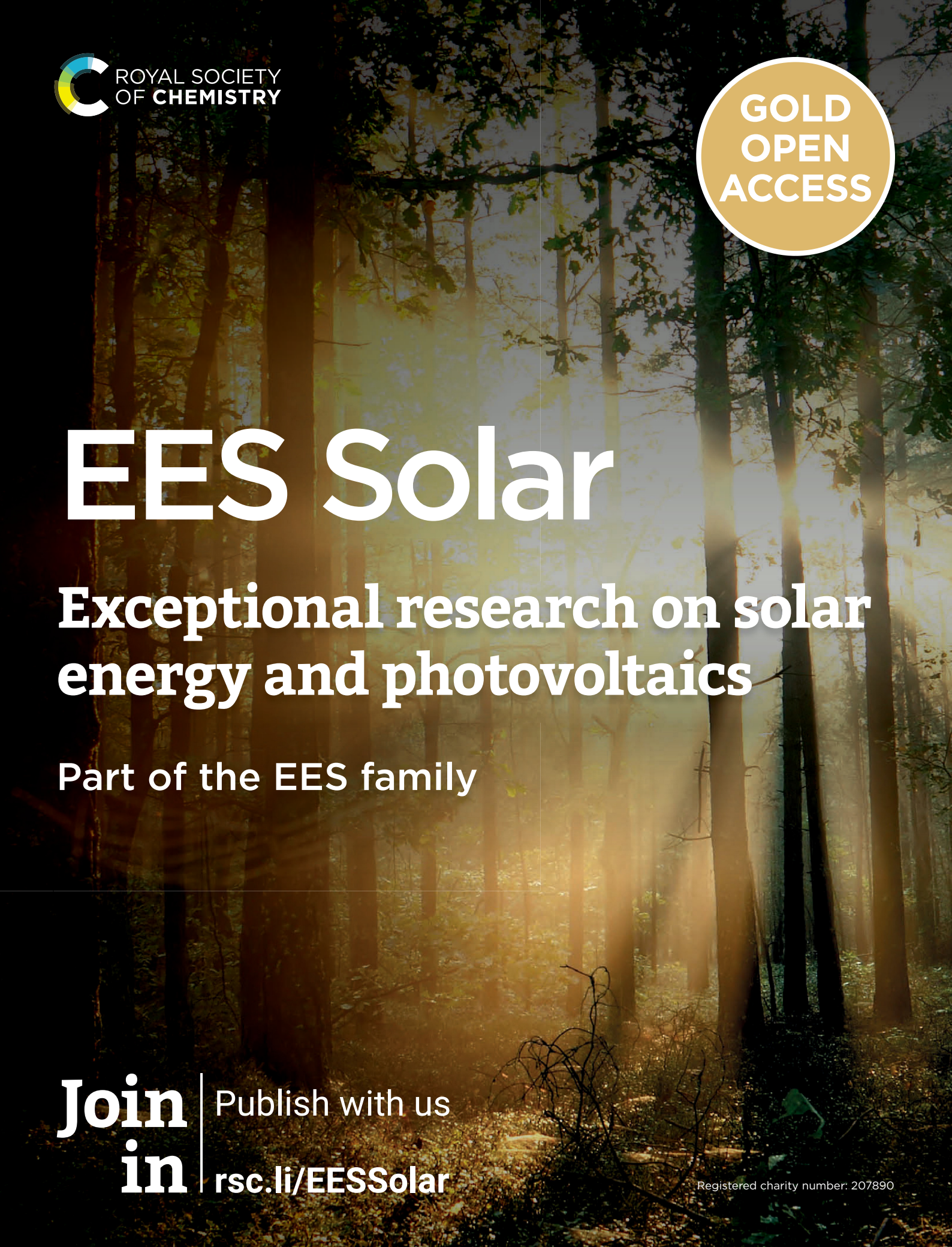
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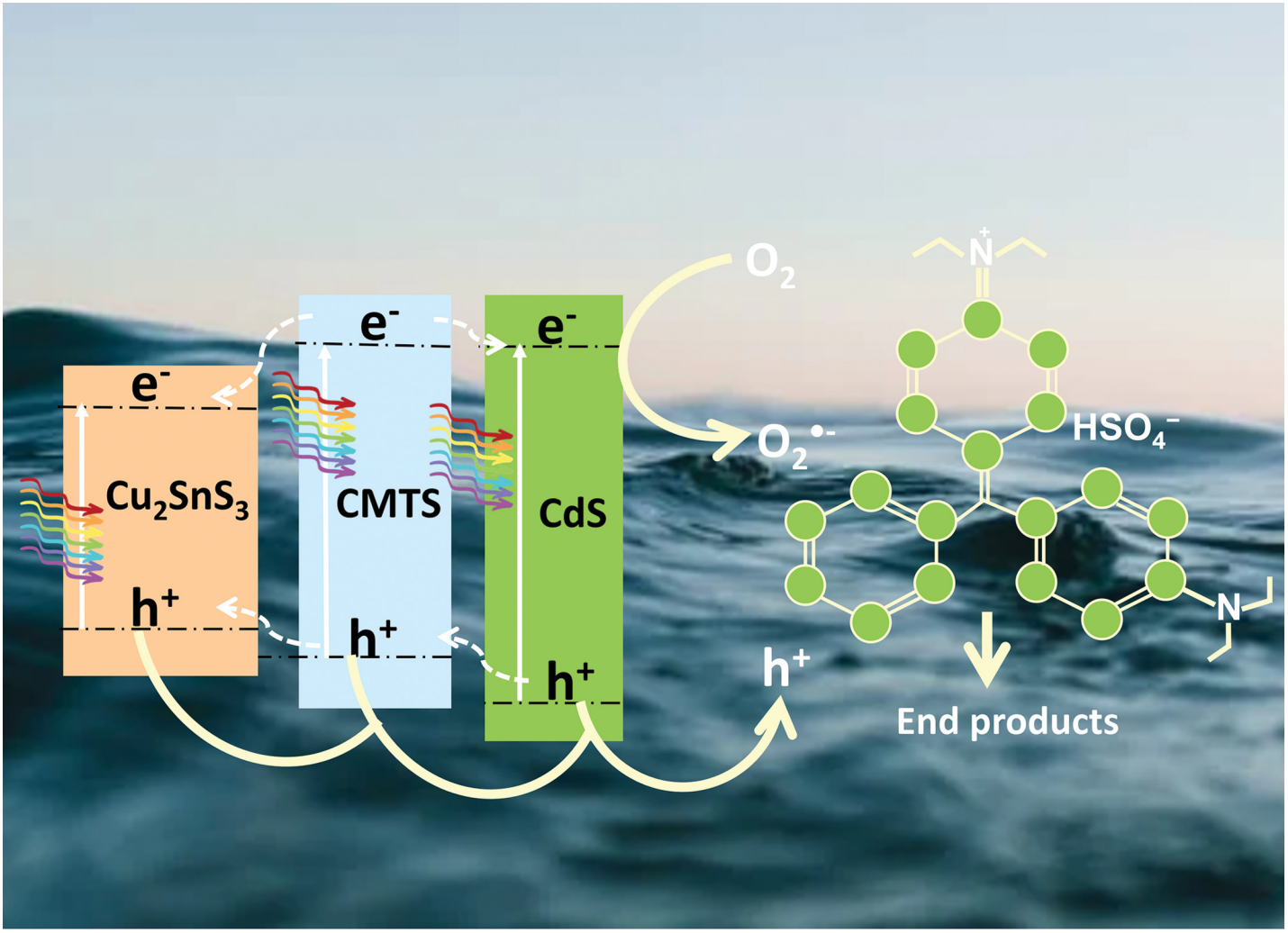

Showcasing research from Professor Mohammad Mansoob Khan, UBD Photocatalysis Laboratory, Chemical Sciences, Faculty of Science, Universiti Brunei Darussalam, Brunei Muara, Brunei Darussalam.

Visible-light-active type-II heterojunction CdS@$Cu_{0.5}Mg_{2.5}SnS_4$ composites for the efficient removal of brilliant green dye

We have synthesized CMTS and CdS@CMTS using a rapid and energy-efficient microwave-assisted method. The photocatalytic degradation of brilliant green using CMTS and CdS@CMTS was achieved with a low photocatalyst dosage. More importantly, an in-depth study on the scavenging/trapping of active species was carried out for the first time using CdS@CMTS to determine the major species involved in the BG degradation process. Therefore, this study shows that CdS@CMTS prepared by microwave-assisted synthesis has the potential to degrade organic pollutants under visible light irradiation and could be applied for environmental remediation.

As featured in:

See Mohammad Mansoob Khan *et al.*, *New J. Chem.*, 2024, **48**, 19060.

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