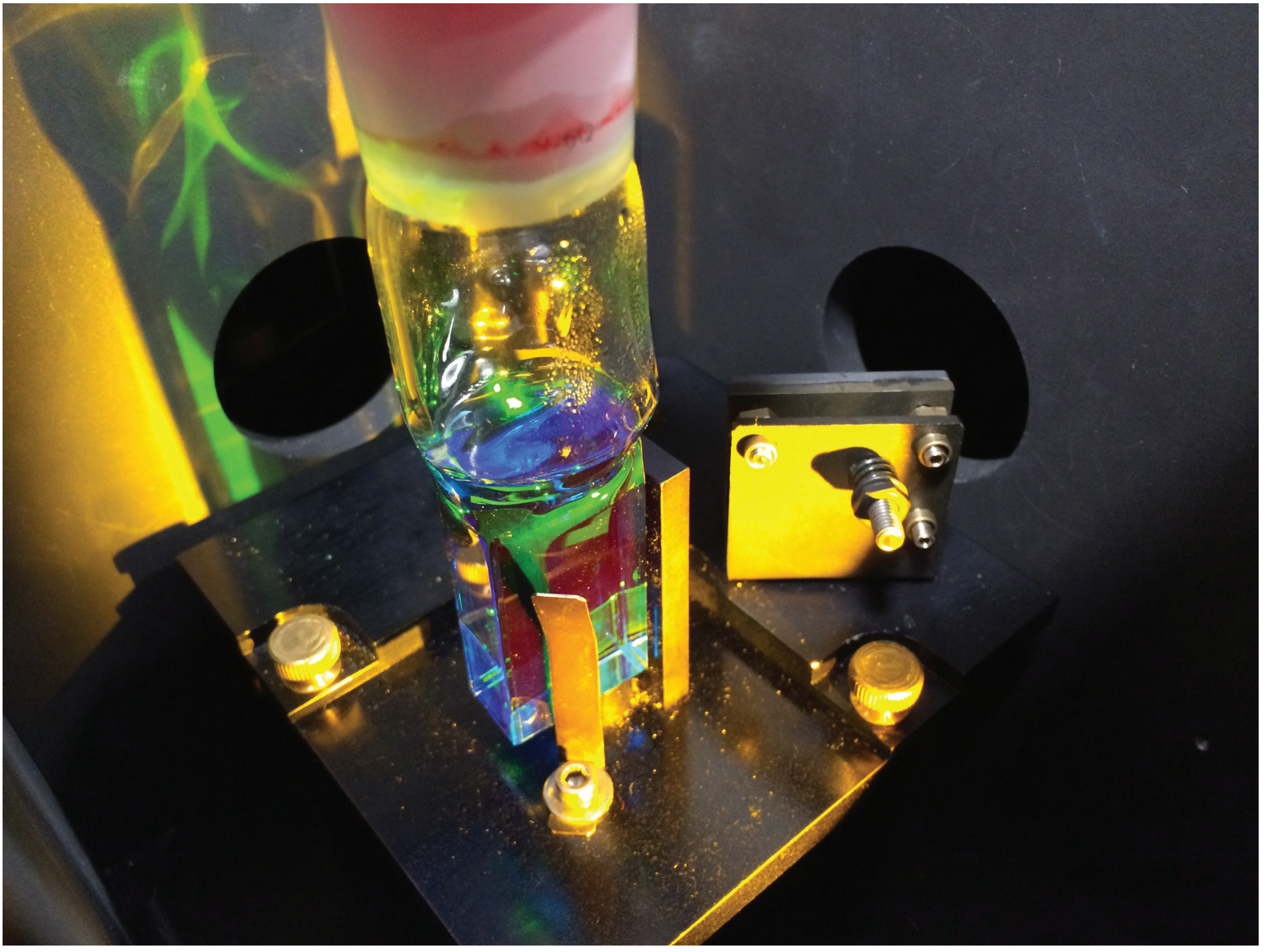

SINGLE(T) RAINBOW

EMMANUEL V. PÉAN - COLLEGE OF ENGINEERING, SPECIFIC

In collaboration with: *Tamara McFarlane (SPECIFIC), Michael Newman (SPECIFIC)*

Funded by: *Zienkiewicz Scholarship and Sêr Solar*

Singlet oxygen is a reactive form of oxygen capable of degrading solar panels thus limiting their lifetime. It is possible to monitor it using a probe emitting light which is then measured via the two openings shown here. The probe can be tested using methylene blue (which acquires its name from its electric blue colour as pictured in the cuvette) that generates singlet oxygen under illumination. When combined, the two chemicals are illuminated with red, yellow and green light merging into an orange light which can be observed around the cuvette. Methylene blue absorbs red and yellow light leaving only the green light to be transmitted which can be observed on the walls surrounding the cuvette.

ENFYS SINGLED

EMMANUEL V. PÉAN - COLEG PEIRIANNEG, SPECIFIC

Mewn cydweithrediad gyda: *Tamara McFarlane (SPECIFIC), Michael Newman (SPECIFIC)*

Ariennir gan: *Zienkiewicz Scholarship a Sêr Solar*

Mae ocsigen singled yn ffurf adweitheddol ar ocsigen a all ddiraddio paneli solar ac felly cyfyngu ar eu hoes. Mae'n bosibl ei fonitro trwy ddefnyddio profiedydd sy'n gollwng golau a gaiff ei fesur wedyn trwy'r ddau agoriad a ddangosir yma. Gellir profi'r profiedydd gan ddefnyddio 'methylen glas (sy'n cael ei enw o'r lliw glas llachar fel y dangosir yn y ddysgl) sy'n cynhyrchu ocsigen singled o dan olau. Pan gânt eu cyfuno, caiff y ddau gemegyn eu goleuo â golau coch, melyn a gwyrdd gan uno'n olau oren y gellir ei weld o amgylch y ddysgl. Mae glas methylen yn amsugno golau coch a melyn gan adael dim ond y golau gwyrdd i gael ei drosglwyddo a gellir ei weld ar y waliau o amgylch y ddysgl.