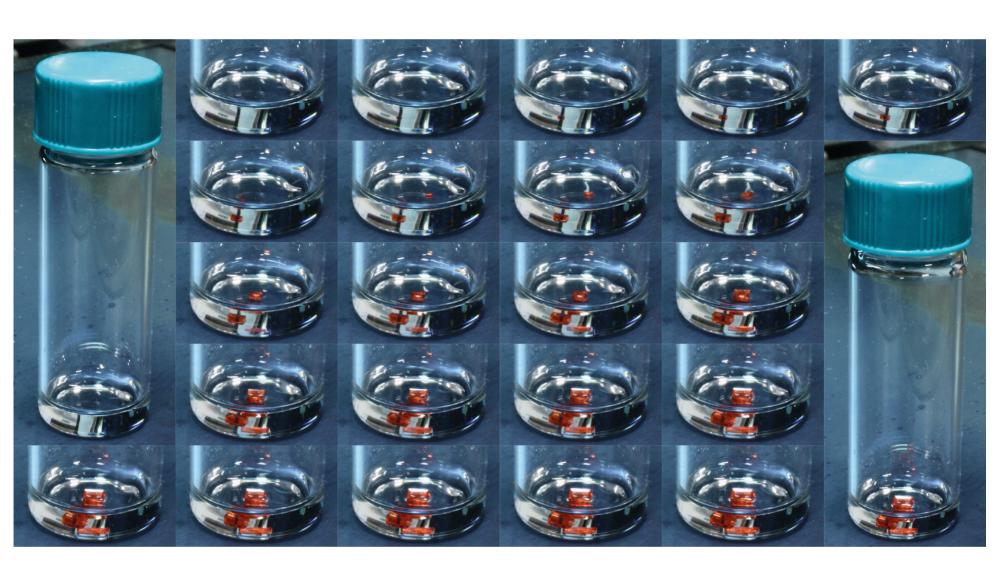
## RESEARCH AS ART 2019 | YMCHWIL FEL CELF 2019

SWANSEA UNIVERSITY RESEARCH FORUM FFORWM YMCHWIL PRIFYSGOL ABERTAWE





## **GROWING CRYSTALS FROM SCRATCH**

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Funded by: Sêr Solar and Zienkiewicz Scholarship

This is an image time-lapse (from left to right, top to bottom) of the growth of perovskite crystals. A solution containing compounds A and B dissolved in a solvent is heated to 100°C. As the temperature of the solution increases, the bonding between compounds A and B and the solvent weakens and A and B reacts with each other to form the AB compound. Here, we observe the growth of 2 perovskite crystals over 11 minutes. Perovskites are very promising materials for solar panels as they are cheap and easy to manufacture.

## TYFU CRISIALAU O'R DECHRAU

EMMANUEL V. PÉAN - PRIFYSGOL ABERTAWE, COLEG PEIRIANNEG, SPECIFIC

**Ariannwyd gan:** Sêr Solar ac Ysgoloriaeth Zienkiewicz

Dyma lun treigl amser (o'r chwith i'r dde, o'r top i'r gwaelod) o dwf crisialau perovskite. Caiff toddiant yn cynnwys cyfansoddiadau A a B hydawdd ei wresogi i 100°C. Wrth i dymheredd y toddiant gynyddu, mae'r bond rhwng cyfansoddiadau A a B a'r toddiant yn gwanhau, ac mae A a B yn adweithio â'i gilydd i ffurfio'r cyfansoddiad AB. Yma, gwelwn dwf dau grisial perovskite dros 11 munud. Mae perovskites yn ddeunyddiau addawol ar gyfer paneli solar, gan eu bod yn rhad ac yn hawdd eu gweithgynhyrchu.