

# Upscaling of stable perovskite PV

## Problem

Perovskite solar cells have seen rapidly improving efficiency and stability with the potential of very low cost. These improvements have been achieved in laboratory scale devices. Scalable coating is only now beginning to be explored.

## Approach

Slot-die coating of both perovskite and contact layers. Rapid optimization through control of atmosphere and the use of multiple slot spacings in parallel. Screen printing of top contact.

## Impact

Better than 2000 hours lifetime has been reached with slot-die devices on flexible substrates. Lifetimes in excess of 4000 hours may be commercially competitive for some applications.

