



Electricity from sunlight

Photovoltaics (PVs) convert sunlight directly into electricity without any moving parts, noise or emissions, and form an increasingly important part of the global renewable energy landscape. Today's PVs are energy-intensive to produce and restricted to rigid flat plate designs. The next generation will be based on very thin films of semiconductors that can be processed from solution at low temperature, which opens the door to exceptionally low cost manufacturing processes and new application areas not available to today's rigid flat plate PVs, particularly in the areas of transportation and buildings integration. This talk will highlight the scale and urgency of the 'energy challenge', and present recent progress in the advancement of a tin perovskite PVs – an emerging 'hot topic' in PV research.