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Abstract: "Review of Solar Cell Technology and Developments"

The growing need for energy across the globe is no longer compatible with a primary dependence on fossil fuels to provide this energy. The cost of extraction and detrimental environmental effects of burning such fuels continue to drive the search for alternative sources of energy. Nuclear energy also requires the mining and enrichment of uranium and is therefore not a renewable source and safe disposal of waste materials remains an issue. Development of ways in which to capture energy through renewable means and more specifically, conversion of the solar spectrum into electricity continues to be a high growth area although, largely fuelled by various stimulus packages. The key to continued longer term growth involves forging ahead with developments to increase solar conversion efficiency and reducing costs to eliminate the reliance on such subsidies. Solar cell types and technologies will be reviewed.

Knut Beekmann has 25 years experience in various aspects of deposition and thin film processing and holds several patents in the field of CVD and plasma deposition. Having started his career as a Process Engineer for a manufacturer of high volume semiconductor processing equipment, he is currently a Product Manager at OIPT with technical and commercial responsibility for PV and MEMS.