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Thin Film Solar Technology II

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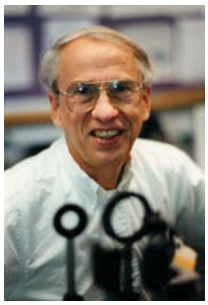

James T. Yardley
Columbia Univ. (USA) and Columbia Energy Frontier Research Ctr. (USA)

Abstract: The past decade has witnessed revolutionary progress in Nanoscale Science and Engineering. At Columbia University this has led to a major initiative in understanding charge transport on a nanometer scale including direct transport of charge through single molecules and a vast array of novel transport phenomena in graphene, a sheet of carbon atoms one atom thick. Through a new Energy Frontier Research Center at Columbia we are beginning to apply understanding of nanoscale transport to the development of thin film organic and hybrid solar cell devices with dramatically improved solar efficiencies through such innovations as transparent conducting graphene electrodes.

Biography: **James T. Yardley** is Professor in the Electrical Engineering Department at Columbia University where he serves as Managing Director of the Columbia Energy Frontier Research Center. He received a PhD in Physical Chemistry from University of California at Berkeley. Previously he served as Vice President of Technology for Honeywell's Electronic Materials business and as Associate Professor of Chemistry at University of Illinois, Champaign-Urbana.