

With the world's natural resources in decline, is solar power a realistic option for the future?

Flexible Solar Cells

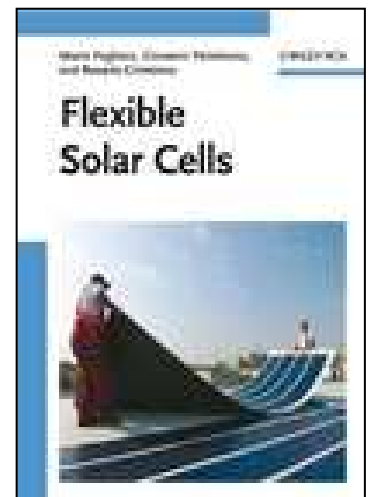
By Mario Pagliaro, Giovanni Palmisano & Rosaria Ciriminna

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With the risks of global warming becoming increasingly more real, it is now generally accepted that we must rid our dependency on fossil fuels and find a cleaner and cheaper source of energy. One such source is solar power. While ticking many boxes, the widespread use of this alternative energy technology on a large-scale is still hampered by limitations such as relatively low conversion efficiency, high mass production costs and limited versatility of older, silicon-based photovoltaic (PV) technologies. So, what direction is solar power technology taking and does it have a future as a realistic source of energy?

Written by experts in the field, *Flexible Solar Cells* is a practical and accessible new book that introduces the topic of new photovoltaic technologies and provides a clear and authoritative account of the principles behind the technology, the future possibilities offered by it, and the engineering required to produce the products. From the basics of photovoltaic films to design issues of working devices, the book comprises an overview of the scientific and technological perspectives as well as an outlook on market opportunities. Covering a wide range of key functional issues, *Flexible Solar Cells* also looks at some of the more practical and industrial problems, from where to buy photovoltaic film to how to improve efficiency to where to use the devices most advantageously.

By taking into account technology and science and containing otherwise difficult-to-obtain information from industrial research and development departments, *Flexible Solar Cells* demonstrates clearly how the new so-called second-generation thin-film solar cells in flexible conformation are a cleaner, cheaper and realistic prospect for the present and the near future. As such, it is an invaluable resource not only for material scientists, chemists, engineers and students of chemistry and physics but also for managers, entrepreneurs, management consultants and politicians who are all faced with the opportunity to use solar energy to generate electricity both in developed and developing countries.



Mario Pagliaro is a research chemist and management educator based in Palermo at Italy's National Research Council where he heads the Solar Sicily's Research Pole and the new Institute for Scientific Methodology. He has conducted research at prestigious institutions including the University of Leiden, the CNRS in Grenoble, the RWTH Aachen and the Ecole Nationale Supérieure de Chimie in Montpellier and is active in management education and in promoting the role of science in society. **Giovanni Palmisano** is a PhD student in Chemical and Materials Engineering at the University of Palermo. He received his MSc in Chemical Engineering in 2005 and currently works on sol-gel materials for selective photo- and electrocatalytic processes. **Rosaria Ciriminna** is a research chemist at Italy's National Research Council Institute of nanostructured materials based in Palermo. Her research focuses on design, preparation and characterization of multifunctional materials.

The authors are available for interview. If you would like to arrange to speak to them or would like to see some sample chapters from *Flexible Solar Cells*, please contact:

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NOTES FOR EDITORS

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