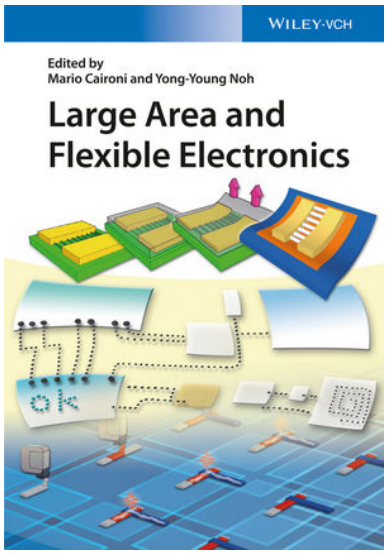

Large Area and Flexible Electronics

Mario Caironi, Yong-Young Noh

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DESCRIPTION

From materials to applications, this ready reference covers the entire value chain from fundamentals via processing right up to devices, presenting different approaches to large-area electronics, thus enabling readers to compare materials, properties and performance.

Divided into two parts, the first focuses on the materials used for the electronic functionality, covering organic and inorganic semiconductors, including vacuum and solution-processed metal-oxide semiconductors, nanomembranes and nanocrystals, as well as conductors and insulators. The second part reviews the devices and applications of large-area electronics, including flexible and ultra-high-resolution displays, light-emitting transistors, organic and inorganic photovoltaics, large-area imagers and sensors, non-volatile memories and radio-frequency identification tags.

With its academic and industrial viewpoints, this volume provides in-depth knowledge for experienced researchers while also serving as a first-stop resource for those entering the field.

ABOUT THE AUTHOR

Mario Caironi is a Tenure Track Researcher at the Center for Nano Science and Technology (CNST) in Milan, Italy, of the Istituto Italiano di Tecnologia. He obtained his PhD in 2007 from the "Politecnico di Milano" and then joined Prof. Henning Sirringhaus' group at the Cavendish Laboratory in Cambridge, UK, to work on inkjet-printed, downscaled organic field-effect transistors (OFET)

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His current research interests are on direct-writing and roll-to-roll printing processes for organic and hybrid micro- and opto-electronics, on the device physics of OFETSs and on organic thermoelectrics.

Yong-Young Noh is Associate Professor in the Department of Energy and Materials Engineering at Dongguk University in Seoul, Republic of Korea. He received his PhD in 2005 from the Gwangju Institute of Science and Technology (GIST), Republic of Korea, and then worked at the Cavendish Laboratory in Cambridge, UK, as a postdoctoral associate with Prof. Henning Sirringhaus from 2005 t0 2007. Afterwards, he worked at the Electronics and Telecommunications Research Institute (ETRI), Republic of Korea, as a senior researcher from 2008 to 2009, and at Hanbat National University as assistant professor from 2010 to 2012. Yong-Young Noh has received Merck Young Scientist Award (2013) and Korea President Award (2014). He has expertise in materials, process and device physics of organic and printed electronics for flexible electronics, especially printed OFETs, carbon nanotube or oxide TFTs and OLEDs.