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Screen printable molecular copper ink for printed electronics**Bhavana Deore, Chantal Paquet, XiangYang Liu, Arnold J Kell, Olga Mozenon and Patrick R L Malenfant**

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Printed electronics is a disruptive manufacturing technique that combines functional materials and printing to make electronic devices in new form factors and enables innovative products. Printed electronics will yield breakthrough technologies in sensing, displays and wireless communication. In this regard, copper based metal-organic decomposition (MOD) inks are promising alternative to silver based inks. We will present results on screen printable copper MOD inks that produce sheet resistivity values of 20-30 mOhm/sq/mil for 5-20 mil wide traces.

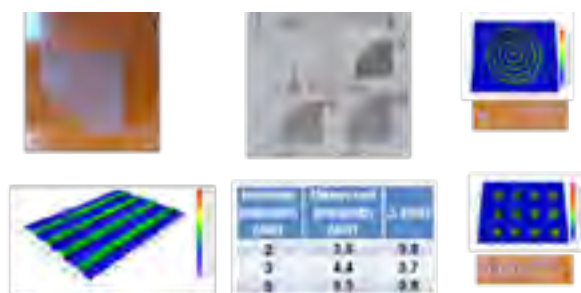


Figure 1: Screen printing and processing on Kapton and Melinex.

Biography

Bhavana Deore has received her PhD in Chemistry in 1998 from Pune University, India. Subsequently, she became a Post-doctoral Fellow in the Yamaguchi University, Faculty of Engineering, Department of Applied Chemistry, Japan under the Venture Business Laboratory and Japan Society for Promotion of Science Fellowship Program. In 2002, she became a Research Associate at University of Manitoba, Department of Chemistry and then joined National Research Council Canada as a Research Officer in 2009. Her research interests include materials development like conjugated polymers, quantum dots and DNA nanovectors for transfection studies in plant cell, and applications like chemical and biological sensors, supercapacitors, etc. Her current research focuses on the 'Development of molecular copper inks for screen printing'. She has authored over 39 publications in leading peer reviewed journals. She has published book on water soluble "Self-Doped Conducting Polymers" 2007 by John Wiley and Sons, Inc.

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