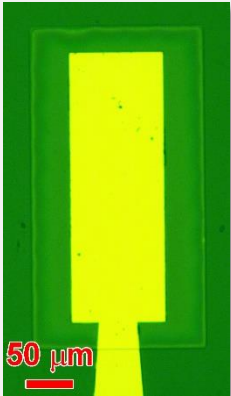
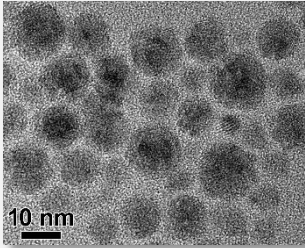




<b>Project Title:</b>	<b><i>Towards Printed Electronics Based on Monodisperse Cu<sub>2</sub>O Nanoparticles</i></b>
<b>Project Short description</b>	<p>The driving force of steering research towards printed electronics is to replace conventional fabrication methods, which are vacuum- and energy-demanding processes typically requiring clean room operation. This project will tackle the preparation of <i>p</i>-type metal-oxide semiconducting inks for solution-based printing of thin film transistors (TFTs), key components for microelectronics.</p>  <p>Successful Fellow will primary focus on wet chemistry colloidal synthesis of monodisperse Cu<sub>2</sub>O nanoparticles for semiconducting ink formulation. Furthermore, <i>p</i>-channel TFTs will be fabricated using printing technique. This will also include probing of the polymer compounds in the TFT architecture, for instance, as the gate dielectric. Finally, electrical characteristic measurements (film conductivity, TFT transfer and output curves) will be used to unravel the details concerning nanoparticles-based TFT performance.</p>  <p>We offer an international atmosphere in the exciting city of Braga, as well as judicious supervising together with the scientific exchange with co-workers.</p>
<b>Expected Start/end date</b>	
<b>Required degree and Background knowledge of students, minimum grade point average, etc...</b>	The successful Fellow is highly motivated and interested in science, and willing to work in a team. She/He is expected to have a basic knowledge of chemistry, physics, and experience with literature survey. Familiarity with colloidal synthesis, printing and electrical characteristic measurements is of advantage.

### Supervisor at INL

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