

**Engineer position (#3/1)**

**Title:** Integration of smart materials in sensor applications

**Character:** Experimental

**Context**

BCMaterials specializes in the research of functional and active materials from synthesis to application. Final validation of the usefulness and applicability of the properties of the studied materials comes from its integration into systems such as sensors or actuators designed to perform a well-defined task. Based on the materials being studied at the BCM (thin-films and multilayers, hybrid magneto-electrics, active polymers, nanostructured coatings, etc.) different types of micro- and nano-sensors are envisaged: magnetic field detectors, resonant sensors for liquid and gas properties, biosensors, etc. The multidisciplinary environment of the BCM guarantees a profitable and enjoyable working ambience.

**Tasks**

The successful candidate will take part in research projects aimed to develop laboratory prototypes of sensors. He will be involved in all the relevant steps of the integration process: characterization of the relevant properties of the materials (magnetic, electrical, optical, etc.), design of interfacing electronics, and evaluation of the performance of the prototype. These tasks imply the intensive use of laboratory instrumentation, measurement and analysis software (LabView, Matlab, etc), simulation packages, rapid prototyping tools, etc.

**Requirements**

PhD, MSc or equivalent in Materials Science and Engineering or Electronics (either one with a background of the other) and two years minimum experience related with the field of the offer. Expertise in specific subjects will be valued: micro- and nano-fabrication, radio frequency circuits, finite element calculations, noise analysis, DOE (design of experiments), etc.

**Application**

Send a CV, motivation letter and two references to [jobs@bcmaterials.net](mailto:jobs@bcmaterials.net)

**Dead line:** August 15th, 2012, 24:00 h GMT