Proceedings of the E-MRS Spring Meeting 2012, Symposium N and Symposium O

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The European Materials Research Society (E-MRS) Spring Meeting 2012 took place in Strasbourg, Palais de la Musique et des Congrès, from the 14th of May to the 18th. Symposia N and O gathered researchers interested in improving the control over light at a truly nanoscale level, with a focus on plasmonics for the latter. Discussions were focused on presenting the recent breakthroughs in the ability to control, concentrate and produce light at the nanoscale—evolving towards quantum optics on the nanoscale. Emphasis was put on the methods to fabricate and characterize the materials enabling these abilities: advanced fabrication methods including e-beam, FIB, self-assembly and synthesis of nanometric sources of light and deeply sub-wavelength and/or time resolved microscopic methods applied to nanophotonics (SNOM, EELS, PEEM, etc.). Moreover, the effort towards nanophotonic devices has been developed via the discussion of active components and strategies to guide and concentrate light on a subwavelength scale. The symposia also addressed the question of how the community tackles the problem of attenuation in plasmonic structures. Eventually, progress on all these fronts is fostered by the development of computational or theoretical models—this has been

touched upon as well. Every session was opened by invited contributions from speakers leading in their field.

The two symposia held a common 1-day session about plasmonic nanoantennas—the quality of the contributions, along with the outstanding presentations of the invited speakers, made of the conference a very successful event, attracting more than 200 scientists worldwide. These proceedings reflect this success, displaying a sample of the variety of the contributions seen at the conference. A couple of articles discuss recent advances in the control of nanoemitters. The use of metal is very present of course, with different applications of plasmonics, from field enhancement at the nanoscale (for SERS or second harmonic generation) to fluorescence enhancement and improvement of solar cells. Eventually, novel methods to fabricate the objects necessary to control light at the nanoscale are reported.

On behalf of the organisers,

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