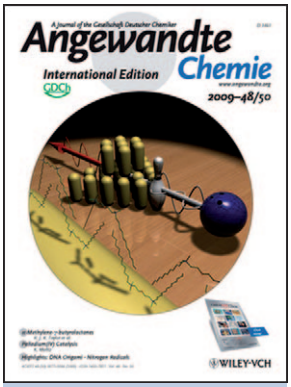
L. M. Liz-Marzán

*The author presented on this page has recently published his **10th article** since 2000 in Angewandte Chemie:* "Binary Self-Assembly of Gold Nanowires with Nanospheres and Nanorods": A. Sánchez-Iglesias, M. Grzelczak, J. Pérez-Juste, L. M. Liz-Márzan, *Angew. Chem.* **2010**, *122*, 10181 – 10185; *Angew. Chem. Int. Ed.* **2010**, *49*, 9985 – 9989.



The work of L. M. Liz-Marzán has been featured on the cover of Angewandte Chemie: "Gemini-Surfactant-Directed Self-Assembly of Monodisperse Gold Nanorods into Standing Superlattices": A. Guerrero-Martínez, E. Carbó-Argibay, J. Pérez-Juste, G. Tardajos, L. M. Liz-Marzán, *Angew. Chem.* **2009**, *121*, 9648 – 9652; *Angew. Chem. Int. Ed.* **2009**, *48*, 9484 – 9488.

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Position:	Professor at the Department of Physical Chemistry, University of Vigo (Spain)
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Education:	1983–1992 Studies of Chemistry and PhD in Physical Chemistry under the supervision of M. Arturo López-Quintela at the University of Santiago de Compostela (Spain) 1993–1995 Postdoctoral research associate with Albert P. Philipse at the Van't Hoff Laboratory for Physical and Colloid Chemistry, Utrecht University (The Netherlands)
Awards:	**2008** Fellow of the Royal Society of Chemistry; **2009** Physical Chemistry Award of the Spanish Royal Society of Chemistry; **2009** A. v. Humboldt–J. C. Mutis Research Award; **2010** DuPont Award for Science
Current research interests:	My research activities can be broadly defined as "colloidal nanoplasmonics". This field involves all steps from colloidal synthesis to plasmon-based applications. We study the formation mechanisms of metallic (plasmonic) nanoparticles to address their synthesis with controlled composition, size, and morphology; we create colloidal composites by directed assembly of plasmonic building blocks in combination with colloidal templates and other functionalities; we fabricate nanostructured thin films and nanoparticle supercrystals in two and three dimensions; we carry out optical characterization of nanoparticles and their assemblies both in the bulk and at the single-nanostructure level, including standard optical spectroscopy and surface-enhanced spectroscopies (SERS in particular). Finally, we work on the design of sensor devices based on the plasmonic properties of such metallic nanoparticles.
Hobbies:	Swimming, photography, reading, traveling

My greatest achievement has been … bringing up two wonderful children.

The biggest problem that scientists face is … public awareness about the need for basic research.

My favorite piece of research is … Michael Faraday's 1857 study on "Experimental Relations of Gold (and Other Metals) to Light".

Chemistry is fun because … you can never be sure of what the result of an experiment will be. Nature (Chemistry) is full of secrets that are there waiting for you to unravel them.

If I won the lottery I would … buy a yacht, but I never play the lottery…

The most important future applications of my research are … clearly in the biomedical field, mainly related to cancer diagnosis and therapy.

In ten years time I will be … older (for sure) and wiser (I hope).

My 5 top papers:

1. "Synthesis of Nanosized Gold-Silica Core-Shell Particles": L. M. Liz-Marzán, M. Giersig, P. Mulvaney, *Langmuir* **1996**, *12*, 4329 – 4335. (This is the first demonstration of homogeneous coating of gold nanoparticles with silica shells of variable thickness.)
2. "Synthesis of Silver Nanoprisms in DMF": I. Pastoriza-Santos, L. M. Liz-Marzán, *Nano Lett.* **2002**, *2*, 903 – 905. (One of the pioneer publications on the colloidal synthesis of metal nanoprisms.)
3. "Au@pNIPAM Colloids as Molecular Traps for Surface-Enhanced, Spectroscopic, Ultra-Sensitive Analysis": R. A. Álvarez-Puebla, R. Contreras-Cáceres, I. Pastoriza-Santos, J. Pérez-Juste, L. M. Liz-Marzán, *Angew. Chem.* **2009**, *121*, 144 – 149; *Angew. Chem. Int. Ed.* **2009**, *48*, 138 – 143. (A nice combination of colloid chemistry with smart polymers to achieve generalized SERS ultra-sensitive analysis.)
4. "Gemini-Surfactant-Directed Self-Assembly of Monodisperse Gold Nanorods into Standing Superlattices": A. Guerrero-Martínez, E. Carbó-Argibay, J. Pérez-Juste, G. Tardajos, L. M. Liz-Marzán, *Angew. Chem.* **2009**, *121*, 9648 – 9652; *Angew. Chem. Int. Ed.* **2009**, *48*, 9484 – 9488. (Demonstration of the oriented assembly of gold nanorods into extended supercrystals.)
5. "The Crystalline Structure of Gold Nanorods Revisited. Evidence for Higher Index Lateral Facets": E. Carbó-Argibay, B. Rodríguez-González, S. Gómez-Graña, A. Guerrero-Martínez, I. Pastoriza-Santos, J. Pérez-Juste, L. M. Liz-Marzán, *Angew. Chem.* **2010**, *122*, 9587 – 9590; *Angew. Chem. Int. Ed.* **2010**, *49*, 9397 – 9400. (Identification of the lateral faces of gold nanorods as high index facets.)

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