



## VENUE

The School will be held at the Centre for Scientific Culture "Ettore Majorana" in Erice, a small town of Sicily in the South of Italy with a great tradition of hosting high quality scientific meetings (<http://www.ccsem.infn.it/>).

The arrival of participants should be on Sunday July 3 and the departure will be scheduled on Sunday July 10.

## REGISTRATION

The total fee for the meeting, which includes full board and lodging (arranged by the E. Majorana Centre) and the local transportation, is 750 Euro. A limited number of fellowships will be available to cover in part the cost of attendance. Interested individuals are kindly requested to attach a curriculum to their applications. Persons interested in attending the course should complete the enclosed application form and send it to:

Dr. Paolo Pasini

INFN  
Sezione di Bologna  
Via Irnerio 46  
40126 BOLOGNA Italy

email: [pasini@bo.infn.it](mailto:pasini@bo.infn.it)

EARLY APPLICATION IS STRONGLY ENCOURAGED

Closing date for application: April 15th, 2011.

# Liquid crystal nanostructures and self-assembling: from organic electronics to metamaterials

## 2nd School of the Italian Liquid Crystal Society

### APPLICATION FORM

Surname.....

Name.....

Date and place of birth.....

Present nationality.....

Degree and other academics qualifications.....

.....

Present position and place of work.....

Address.....

Zip..... City.....

Country.....

Tel.....Fax.....

E-mail.....

Current research interests.....

.....

List of publications (enclosed)

I am willing to present a contribution (poster only) :

yes   Tentative title:

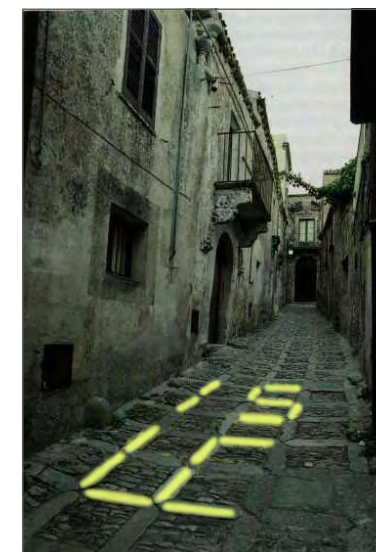
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International School  
of Liquid Crystals  
18th Course

2nd School of Italian Liquid Crystal Society

Erice, 3 - 10 July 2011



## Liquid crystal nanostructures and self-assembling: from organic electronics to metamaterials

### Directors:

A. d'Alessandro, P. Pasini and C. Zannoni

Supported by the European Office of Aerospace Research & Development and technically sponsored by





# 2<sup>nd</sup> School of Italian Liquid Crystal Society

## Purpose of the School

The SICL Schools are aimed to Ph.D. students and young Post-Docs in Physics, Chemistry, Mathematics and Engineering who are interested in widening their knowledge in the fields of Liquid Crystals and related fields with particular focusing in nanoscience and nanotechnology.

The objective of the second SICL School is to provide a state-of-the-art review of the rapidly evolving experimental and theoretical techniques employed in the study of these fields. After an introduction on LC physics and chemistry, the contents of this second SICL School will cover the state-of-the-art of the rapidly evolving experimental, theoretical and computational techniques, which interface novel liquid crystal and nanocomposite molecular organization to the emerging fields of organic electronics and metamaterials through self-assembly. The School will consist of 6 working days with 15-17 lecturers.

The number of participants will be limited to about 50 to allow a wide opportunity to take part fully in the proceedings and discussions of the Course. Updated information can be found at [www-th.bo.infn.it/islc](http://www-th.bo.infn.it/islc).

## Topics

- Introduction to LC optics and photonics
- Introduction to LC defects
- Introduction to synthesis of LC and novel biaxial compounds
- Negative index dielectrics using LC
- Traditional and novel NMR techniques for LC systems
- NMR studies of solutes in LC
- Description of molecular organizations in LC
- Modelling techniques for LC
- Optical metamaterials: from basic physics to applications
- Nanostructured LC assemblies of nanoparticles
- Liquid crystal semiconductors and applications
- Discotic liquid crystals and organic electronics
- Self assembling and molecular packing properties
- Chirality and self-assembled nanostructures
- X-ray techniques for LC investigations
- Chemistry of Self-Organized Nanocomposites for negative refractive index materials
- Chiral nematic colloids
- Ferroelectric nanoparticles

## Lecturers

Philippe Barois, CNRS, Université de Bordeaux 1, France  
Valentina Domenici, University of Pisa, Italy  
Bertrand Donnio, Université de Strasbourg, France  
James Emsley, University of Southampton, UK  
Dean Evans, Air Force Research Laboratories, USA  
Daniele Finotello, National Science Foundation, USA  
Attilio Golemme, , University of Calabria, Italy  
Randy Kamien, University of Pennsylvania, USA  
Iam-Choon Khoo, University of Pennsylvania, USA  
Georg Mehl, University of Hull, UK  
Mary O'Neill, University of Hull, UK  
Giuseppe Strangi, University of Calabria, Italy  
Epifanio Virga, University of Pavia, Italy  
Claudio Zannoni, University of Bologna, Italy  
Slobodan Zumer, University of Ljubljana, Slovenia

## Scientific Committee:

G. Assanto, A. d'Alessandro, G. De Luca, P. Pasini, G. Strangi, E. Virga, C. Zannoni