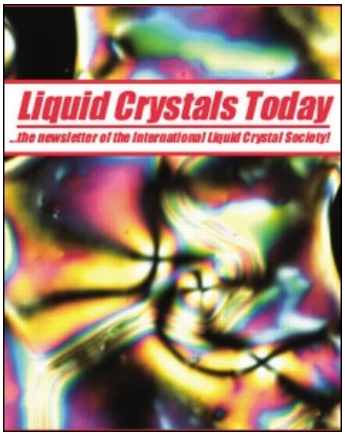

Liquid Crystals Today
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713681230

"New Short-Pitch Bistable Ferroelectric (SBF) Liquid Crystal Displays"

J. Fünfschilling[a]; M. Schadt[a]
[a] F Hoffmann-La Roche, Central Research Units, Basel, Switzerland

To cite this Article Fünfschilling, J. and Schadt, M.(1991) '"New Short-Pitch Bistable Ferroelectric (SBF) Liquid Crystal Displays"', Liquid Crystals Today, 1: 2, 7
To link to this Article: DOI: 10.1080/13583149108628577
URL: http://dx.doi.org/10.1080/13583149108628577

SOCIETY NEWS

GLENN BROWN AWARD for PhD THESIS

The Planning and Steering Committee of the International Liquid Crystal Conference instituted a prize in honour of Professor Glenn Brown, for an outstanding PhD thesis in the field of liquid crystal research. The laureate is selected prior to each conference in the biennial series of International Liquid Crystal Conferences and will deliver the Glenn Brown lecture at the Conference.

The Award Committee consists of S Chandraskhar (Bangalore); S Kobayashi (Tokyo); H Sackmann (Hallé) and S T Lagerwall (Chairman) (Göteborg). The next award will be presented at the 14th International Conference in Pisa, Italy, June 21-26 1992. Nominations should have reached the Chairman before 10 January 1992.

There are no restrictions regarding the subfield, thus theoretical, experimental or applied work is equally welcome on both thermotropic and lyotropic systems. A thesis can be nominated by anyone and should not be more than three years old.

The nominating person should state his name and affiliation as well as those of student and thesis adviser. In the nomination the full thesis — which will not be returned — has to be accompanied by a four-to-five page abstract in English. If the thesis itself is not written in English, German or French, the abstract should be about twice this length.

Correspondance should be sent to: Prof S T Lagerwall, Physics Dept, Chalmers University of Technology. S-412 96 Göteborg, Sweden.

Membership

Applications for membership continue to arrive and we now have well over 200 registered members.

There are many more liquid crystal scientists who are expected to join, and we look forward to receiving YOUR application (membership form enclosed). We hope that a significant source of income will be through sustaining membership, and if you are in a company with liquid crystal interests perhaps you will propose it for sustaining membership. About 25% of our membership is in countries with non-convertible currencies. We have not yet finalised arrangements for collection of dues from these areas, but hope that an arrangement will appear in the next issue of *Liquid Crystals Today*.

National Societies or groups which have affiliated so far are those from Canada, Italy and the United Kingdom, and we look forward to receiving affiliation applications from other national societies. According to our constitution, affiliation ensures regional representation on the Board of Directors of the ILCS.

Liquid Crystal Science in Italy *(continued from page 5)*

Liquid Crystals as Solvents

The synthesis and characterisation of PLCs and model compounds of low molecular weight is carried out by Sirugi and his group in Napoli. Systems studied include MOLCs, and reticulated LC model compounds. The reactivity of liquid crystalline phases is studied in Palermo by De Maria and his group. In particular LCs are used as solvents to produce organic reactions which otherwise would proceed with difficulty.

The possibility of using lyotropic LCs for this purpose is also studied. Mechanical properties of LCPs are studied in Pisa by Magagnini and his group. Chiellini 's group synthesise and characterise LCPs, with particular emphasis on structural modifications and correlations between chirality and other properties. Surface properties of LCs are researched in Pisa by Faetti and his group by interface ellipsometry, along with the determination of elastic and viscosity properties.

Optical Properties

Phase transitions in LCs are studied by Scuderi and his group in Roma. In particular photothermal and calorimetric critical measurements are made to study the universality classes of different phase transitions in LCs. Non-linear optical effects are being measured in liquid suspensions of dielectric microparticles. Several macroscopic properties, particularly of thin layers and interfaces, are the object of research by Oldano and his group in Torino. Theoretical work is also being done on the statistical mechanics of phase transitions, on the optical behaviour of thin layers and on continuum behaviour. Experimental work on surface characteristics (anchoring energy, surface polarisation), optical properties of a-chiral and chiral systems, noise analysis, dielectric and thermal properties is also beingstudied.

In conclusion liquid crystal science in Italy is alive and well, and has risen to a high level of competence and expertise in a comparatively short time. ❑

Scientific Notes

"New Short-Pitch Bistable Ferroelectric (SBF) Liquid Crystal Displays"

J Fünfschilling and M Schadt, F Hoffmann-La Roche, Central Research Units, CH-4002, Basel, Switzerland

A new type of bistable electro-optical device based on ferroelectric S_c^* liquid crystals exhibiting a short pitch and a large spontaneous polarisation has recently been reported (Japanese Journal of Applied Physics, Vol 30, 1991). SBF-LCDs have short switching times (25 μs) at room temperature, contrast ratios > 35 as well as high multiplexing ratios (> 1000). On-state brightness is large due to memory switching angles of 44°, while response times and memory tilt angles only have a weak temperature dependence.❑