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## Liquid Crystals Today

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## APresidential Message

Geoffrey R. Luckhurst<sup>a</sup>

<sup>a</sup> University of Southampton, United Kingdom

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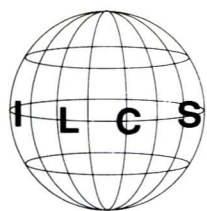
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# LIQUID CRYSTALS Today

Vol. 4, No 2, September 1994

## A Presidential Message

The 15th International Liquid Crystal Conference in Budapest proved to be just as successful as its predecessors. The number of participants was certainly high in keeping with the enormous number of posters. This, together with the quality of the science, both pure and applied, provided a rich feast and indicates just how active and vibrant our multidisciplinary subject is. For me, the best measure of this was the presentation this year of four Glenn Brown Awards and the outstanding lectures which the four laureates gave.

In between all this activity and heat, the Board of Directors found time to meet on two occasions. During these we were forced to find a replacement for the Secretary of the Society, Professor David Dunmur. David has been our Secretary since the inception of the Society in 1990. Much of our success is due to David's considerable talents and sheer hard work. He will clearly be a hard act to follow and so I am especially pleased that Professor Giancarlo Galli from Pisa has accepted the invitation to be the new Secretary. The other Officer to complete his term is Professor Lui Lam who has been the Chairman of the Conference Committee. Lui had much to do with the founding of the Society in its

(continued on page 5)

### CONTENTS:

Optically controlled alignment of liquid crystals	pp 1-4
Society News	pp 4-5
ILCS Meeting Report	p 6
Glenn Brown Awards	p 7
People in the News	p 7
Forthcoming Meetings	p 8

## OPTICALLY CONTROLLED ALIGNMENT OF LIQUID CRYSTALS

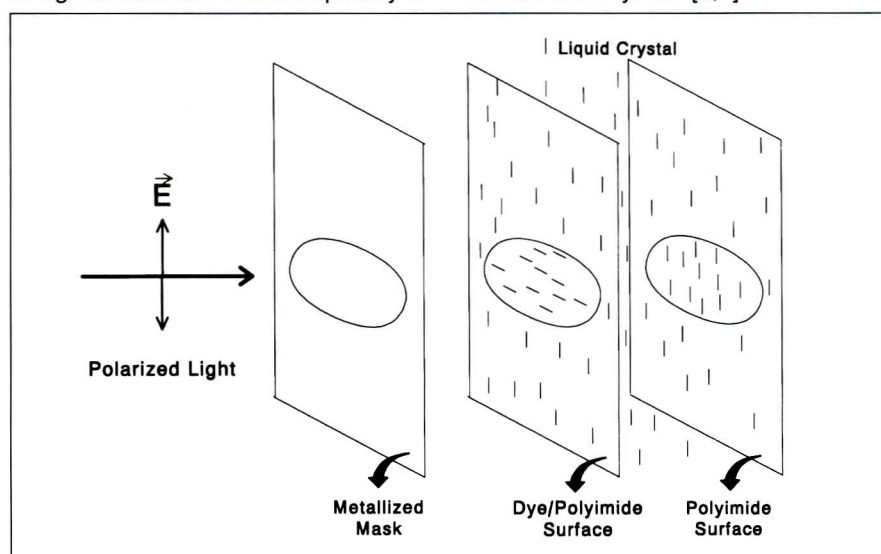
from Wayne M Gibbons, Paul J Shannon and Shao-Tung Sun,  
Hercules Inc. Research Center, Wilmington,  
DE 19808-1599, USA.

**Alignment of the liquid crystal director is important for many liquid crystal applications. Many techniques have been developed to provide macroscopic homogeneous alignment of liquid crystals:** mechanical rubbing of alignment polymers [1]; oblique deposition of inorganic materials [2]; gratings [3]; and non-rubbed orientation films [4].

All these techniques have their unique advantages and disadvantages but share in common the inability to generate erasable, high spatial resolution patterned alignment of the liquid crystal director. A new technique uses specially designed materials that are optically al-

tered to create homogeneous, high spatial resolution alignment of the liquid crystals [5-9].

Although the physical mechanisms may vary for the optically controlled alignment, all systems revealed to date require polarized light and result in a net homogeneous orientation of the liquid crystal perpendicular to the incident light polarization (see Figure 1). The majority of the optically controlled alignment systems can be erased by rotating the incident light polarization by 90 degrees [5,8,9]. Some systems are irreversible, and thus are limited on the number of write/rewrite cycles. [6,7].



**Figure 1.** The geometry of the illuminated liquid crystal cell. The glass substrates of the cell are not shown for clarity. The rods represent the liquid crystal orientation near the substrates before and after illumination. In this example, a twisted alignment of the liquid crystal results since the back alignment is not optically active.

# SOCIETY NEWS

## A Presidential Message *(cont. from front page)*

present form and we should all be grateful to him for that. He is to be replaced by Professor Rainer Trebin from Stuttgart whose first task will be to guide the Board in its choice of sites for the ILCC in 1998 and 2000.

It is important that the Society continues to develop in response to the needs of its members. The Board of Directors has therefore charged the Executive Committee, which comprises the President, Vice-President, Secretary and

Treasurer, to undertake a review of the Society's activities and to consider how these should develop further. The Review will be wide ranging and to assist the Executive Committee, I urge members of the Society to write to the new Secretary, Professor Galli, with their comments on our present activities and their ideas for the future.

*Geoffrey R Luckhurst,  
University of Southampton,  
United Kingdom*

### Treasurer's Reports 1992 and 1993

The financial report of the Treasurer, **J W Doane** as presented at the 15th ILCC in Budapest, Hungary, was as follows:

**Balance on hand, 1 Jan 1992** **\$26,648.15**

**EXPENSES:**

Filing fee (Ohio)	250.00	
Office and banking expenses	930.21	
Newsletter <i>Liquid Crystals Today</i>		}
Secretarial expenses		
Mailing to members	10,816.49	

**Total Expenses:** **11,996.70**

**INCOME:**

Members dues	9,038.00
Advertising in LC Today	200.00
Interest on savings	881.92

**Total Income** **10,119.92**

**Balance on hand, 31 Dec 1992** **\$24,771.37**

**Balance on hand, 1 Jan 1993** **\$24,771.37**

**EXPENSES:**

Filing fee (Ohio)	50.00	
Office and banking expenses	787.18	
Newsletter <i>Liquid Crystals Today</i>		}
Secretarial expenses		
Mailing to members	3015.00	
Glenn Brown Award for 1992	500.00	

**Total Expenses:** **4,352.18**

**INCOME:**

Members dues	5,205.00
Advertising in LC Today	400.00
Interest on savings	795.11

**Total Income** **6,400.11**

**Balance on hand, 31 Dec 1992** **\$26,819.30**

## Membership

The present membership of the ILCS is drawn from 41 countries, and as of June 1994, there were over 700 members on the membership database. Not all have renewed their membership, but it is hoped that following a renewal drive in the Autumn, the majority will remain full members of the ILCS. The distribution of our membership is shown in the table below.

### ILCS Membership by country

Argentina	2	Italy	35
Armenia	1	Japan	61
Bangladesh	1	Korea	2
Belgium	4	Mexico	1
Byelorussia	14	Netherlands	10
Brazil	14	Philippines	5
Bulgaria	7	Poland	21
Canada	14	Portugal	2
Chile	1	PR China	20
Croatia	1	RO China	27
Czech Rep	1	Romania	2
Egypt	1	Russia	32
Finland	1	Saudi Arabia	1
France	10	Slovenia	5
Georgia	3	Spain	5
Germany	27	Sweden	9
Greece	2	Switzerland	6
Hungary	2	UK	45
India	113	Ukraine	21
Ireland	6	USA	190
Israel	5	Unspecified	2

Any enquiries concerning membership should be addressed to the Membership Secretary, Chuck Rosenblatt (*address on page 4*).

#### Comments & Contributions to:

The Editor, Dr D A Dunmur,  
Dept of Chemistry, University of  
Sheffield, Sheffield S3 7HF, UK.  
Fax: (742) 750182  
e-mail: D.Dunmur@sheffield.ac.uk

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