

Cholesteric Blue Phases

Workshop organized by Richard M. Hornreich
7 and 8 December 1989*

Participants: P. Crooker (Honolulu), H. Hanley (Boulder), G. Heppke (Berlin), R. Hornreich (Rehovot), H. Kitzerow (Berlin), H. Kosswig (Berlin), L. Longa (Krakow), C. Pappenfuß (Berlin), P. Pieranski (Paris), F. Porsch (Paderborn), A. Saupe (Kent), B. Spier (Paderborn), H. Stegemeyer (Paderborn), H.-R. Trebin (Stuttgart).

The purpose of this workshop was to (a) critically review the current state of our knowledge of *Blue Phases*, (b) pinpoint specific areas in which further experimental and/or theoretical work is required, (c) specify the most promising lines of investigation to resolve these open problems, and (d) explore the implications of a decade of intensive research on Blue Phases for other problems in the general field of anisotropic fluids. The emphasis in all contributions was on *open problems and ways to solve them*. The program was as follows:

Thursday, Dec. 7:

Blue Phase III

P. Crooker: Experimental Assessment

R. Hornreich: Assessment of Blue Phase III Models

Electrostriction in Blue Phases

H. Stegemeyer/F. Porsch: Experimental Assessment

H.-R. Trebin: Theoretical Viewpoint

Friday, Dec. 8:

Cubic & Field-Induced Phases

H. Kitzerow: Experimental Assessment

L. Longa: Theoretical Overview

Discussion & Implications

Open Discussion & Implications of Blue Phase Results

G. Heppke: Summary

In addition, there were several informal presentations by other attendees.

* Das Seminar wurde gefördert durch die Otto-und-Martha-Fischbeck-Stiftung.

The attendees felt that the workshop had been very successful. Some outstanding differences in the results reported by the experimental groups in Berlin, Paderborn, Paris, and Honolulu were clarified and suggestions were made as to where future collaboration between these workers could be helpful. New lines for future experimental studies were also crystallized. On the theoretical side, it became clear where new developments and, even more important, new concepts were needed. These are now being worked upon intensively.