

This article was downloaded by:

On: 25 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Liquid Crystals

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713926090>

The night I danced with Al Saupe. A reflection

Edward T. Samulski^a

^a Department of Chemistry, University of North Carolina, Chapel Hill, USA

Online publication date: 06 July 2010

To cite this Article Samulski, Edward T.(2010) 'The night I danced with Al Saupe. A reflection', *Liquid Crystals*, 37: 6, 625 – 626

To link to this Article: DOI: 10.1080/02678292.2010.488367

URL: <http://dx.doi.org/10.1080/02678292.2010.488367>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

INVITED ARTICLE

The night I danced with Al Saupe. A reflection.

Edward T. Samulski*

Department of Chemistry, University of North Carolina, Chapel Hill, USA

(Received 14 April 2010; accepted 20 April 2010)

1. Lost and found in translation

In the 1960s, graduate education in physics and chemistry in the United States required one to have ‘reading proficiency’ in two foreign languages from countries that had a significant scientific literature. I opted for French and German, learning just enough to answer a few general questions about a modest excerpt from the respective chemical journals. While I passed the exams, I was *unable* to read easily those languages and extract subtle information, especially a quantitative appreciation of complex/delicate scientific issues. And as my dissertation research involved NMR studies of lyotropic polypeptide liquid crystals, mastery of the contents of Al Saupe’s papers was essential. Fortunately at that time, liquid crystals were being studied intensively at Bell Laboratories in Murray Hill, New Jersey, by Saul Meiboom and Larry Snyder. The proximity of Bell Labs to Princeton enabled me to visit periodically. On one such visit I was very happy to get a copy of an official Bell Laboratory

English translation of the then newly published Saupe paper [1]. At the time, these translations were perhaps my most treasured scientific possessions. I still have them (see Figure 1). Note the translator’s unfamiliarity with liquid crystals: ‘kristallinen Flüssigkeiten’ was translated as ‘crystal liquids.’ In fact, none of my contemporaries in graduate school had ever heard of liquid crystals. The future ubiquitous presence of liquid crystal displays was unimaginable in 1965.

2. Broken symmetry

Over the intervening years I would meet Al on occasional visits to Kent State University and at liquid crystal meetings around the world. One such meeting is particularly memorable. It was a meeting on lyotropics organised by the Università della Calabria, in Cetraro on the coast just north of Paola, Italy, September 13–18, 1982 (see Figure 2). The proceedings of the meeting were published in *Il Nuovo Cimento* in 1984. Al’s talk, ‘On the Structure and the Physical Properties of Micellar Nematics’ [2], described the first

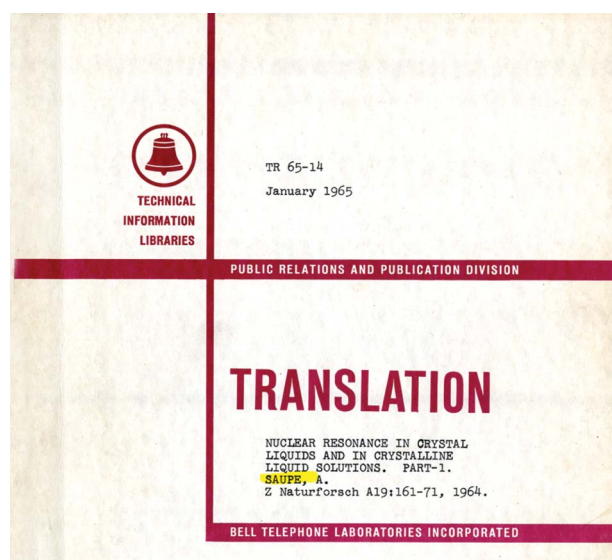


Figure 1. Bell Laboratories translation of Saupe’s 1964 paper.



Figure 2. Al Saupe (centre) discussing science with Heino Finkelmann (left) and Hans Gruler (right) in Calabria (September 1982).

*Email: et@unc.edu

NATIONAL SCIENCE FOUNDATION		PROPOSAL EVALUATION FORM		NSF Form 1 (4/84) Supersedes All Previous Editions
PROPOSAL NO. OMR-8512253	INSTITUTION Kent St Univ			PLEASE RETURN BY 06/20/85
PRINCIPAL INVESTIGATOR Alfred Saupe		NSF PROGRAM SOLID STATE CHEMISTRY PRO		
TITLE Physical Properties of Amphiphilic Nematics (Materials Research)				
Please evaluate this proposal using the criteria presented on the back of this review form. Continue on additional sheet(s) as necessary.				
<p>It is always a pleasure to review Saupe's proposals. A very concise research effort on materials with relevance to a number of technologically important areas (microemulsions, thin films, etc.) is proposed. The critical aspects of amphiphilic nematics are clearly recognized by a very competent and systematic researcher. The proposed work is primarily logical extensions of an extant sound research program. Fundamental and important aspects of structure, phase transitions and elastic properties of lyotropic materials will accrue from the research. The extension of the program to polymeric amphiphiles might open up new and exciting phenomena; it is difficult to judge how serious this intention is, however, from the few remarks about potential sources of samples.</p> <p>Continued support of Saupe's effort will enable a first class scientist to pursue investigations of a largely overlooked (in the USA) area of liquid crystals that will have impact on the general structure-property-stability question in mesophases. His background is impeccable and the proposed methodologies demonstrably sound.</p>				

Figure 3. An excerpt from a 1985 review of an NSF proposal from Al Saupe.

experimental evidence for a (re-entrant) biaxial nematic phase, a lyotropic phase composed of potassium laurate/1-decanol/water, that he and Yu announced a year earlier in *Physical Review Letters* [3].

The meeting was most memorable for me for the social aspects that involved Al. In particular, there was an obligatory meeting with the Mayor of the village of Rende, where he offered toasts to the attendees. During his speech, there was a spontaneous realisation that someone should respond to the Mayor in kind, with gratitude to the village for hosting the meeting. Several started whispering during the Mayor's speech in an effort to identify the spokesperson. Eventually, someone whispered loudly, 'It should be the oldest of the attendees!' At that point, the symmetry of our group was broken as everyone turned simultaneously and looked at Al! I recall being embarrassed for him, but he smoothly accepted the non-verbal nomination, and in a few milliseconds managed to come up with something uncharacteristically flowery to respond in kind to the Mayor's toast.

3. Biaxial discothèque

Later that evening, the Italian students had prepared a less formal reception – a dance party with inimitable Italian disco music playing. They really wanted this to be a fun evening, one in which everyone would 'cut loose', but for the most part, the scientist 'nerds' from abroad stood around talking shop. However, gradually people began tentatively moving to the music, and

because there were more men than women, people started dancing in small groups. As I recall, Al and I were standing on the edge of the dance floor engaged in a conversation about mesogen internal degrees of freedom. I looked around and noticed that everyone but us was making an effort to oblige the Italian hosts by dancing.

Now, Al was not the kind of person you'd pick to have a good time with. Nonetheless, I summoned up enough nerve to ask Al if he would like to dance. I think it also required a fair amount of courage on his part to answer, because he, in his characteristic manner, studied me intently for several seconds before finally agreeing. And so we joined the gyrating masses. Fortunately, there are no video recordings of this event.

4. Modest proposals

Years later I would occasionally be asked to review Al's proposals for research funding (see Figure 3). Like his dancing, they were no-nonsense, rigorous, science-only research plans. I would often conclude my reviews by facetiously complaining that Al's proposal should be penalised for its conspicuous absence of hype!

References

- [1] Saupe, A. *Z. Naturforsch.* **1964**, *19a*, 161.
- [2] Saupe, A. *Nuovo Cimento* **1984**, *3D*, 16–29.
- [3] Yu, L.J.; Saupe, A. *Phys. Rev. Lett.* **1981**, *45*, 1000.