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On: 18 February 2013, At: 13:14

Publisher: Taylor & Francis

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## Molecular Crystals and Liquid Crystals Science and Technology. Section A. Molecular Crystals and Liquid Crystals

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/gmcl19>

### Recollection of MARIAN MIESOWICZ (1907-1992)

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Version of record first published: 24 Sep 2006.

To cite this article: Jerzy A. Janik (1994): Recollection of MARIAN MIESOWICZ (1907-1992), Molecular Crystals and Liquid Crystals Science and Technology. Section A. Molecular Crystals and Liquid Crystals, 249:1, vii-viii

To link to this article: <http://dx.doi.org/10.1080/10587259408038649>

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## Recollection of MARIAN MIESOWICZ (1907 - 1992)

by

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The death (in April this year) of professor Marian Mięśowicz, a great physicist and a great man saddened all those who knew him. He offered me his friendship many years ago and although twenty years my senior he always treated me like his equal. I admired and respected him. As it is generally known ca. 60 years ago he discovered the phenomenon of viscosity anisotropy in liquid crystals. Then he turned to another field and became a high energy physicist. But his passion for the old subject of interest was strong enough to encourage me to undertake the study of liquid crystals when I was young. I am grateful to him for this. Below you will find some very personal memories from the years of our friendship.

I remember when I saw Mięśowicz for the first time. It was in February 1945, just after the German army had left Kraków. I just started studying physics at the newly reopened Kraków university. Five years of belonging to the class of Untermenschen made me eager to seek more knowledge than that gained from lectures. So, one day, I found my way to the colloquium on physics, where a young physicist was presenting his project on cosmic radiation studies with apparatus whose main part were Geiger-Müller counters. I understood very little, but felt in some way included in an inner circle! The young physicist (who presented the project) was Marian Mięśowicz.

How did happen that Mięśowicz, after his brilliant discovery of the anisotropy of viscosity, decided to abandon liquid crystals?

In 1936-37 he obtained a scholarship for research abroad and left Kraków for Utrecht believing that he would continue the liquid crystal studies there. But the Dutch senior physicists persuaded him not to. "the field of liquid crystals has already been full exploited" - they said. "It would be silly to dig yourself into a subject without perspectives. Better start working with us on nuclear radiation. We have here a problem connected with Geiger-Müller counters ..." And that was it! One must add that Mięśowicz did a lot as a high energy physicist and his name is very well known among specialists in this field.

Once, it must have been in 1950-ies, I gave a seminar on neutron scattering by molecules. I said that it was a pity that molecules could not be easily polarized in, say, an electric or magnetic field, since it would then be possible to verify a theory of neutron scattering by molecules. After the seminar Mięśowicz came up to me and said that there are molecular objects which can be easily oriented - the nematic liquid crystals. This is how I entered the field.

Mięśowicz once told me an interesting story showing how strongly a physicist can stick to a current paradigm of physics. When he found out that nematic liquids can behave anisotropically he told his professor, Konstanty Zakrzewski, about it. But Zakrzewski did not

believe it. Liquids are by definition isotropic, he said. Today he would have said perhaps, that such a thesis belongs to the paradigm of physics. Mięslowicz then invited Zakrzewski to the laboratory. They spent two days there repeating Mięslowicz's experiments on viscosity. Zakrzewski was too good an experimenter to deny facts, He would rather reject the paradigm.

A story from Mięslowicz's childhood: He was eleven years old when a bomb destroyed the apartment in Lwów where his parents has been living, and killed both of them. Then his uncle took him to Kraków. On Sundays Marian used to visit two other boys his age who were rather noisy and not very well behaving. Sometimes their mother spanked them and they cried. And Mięslowicz cried too. Because there is nobody to spank me, he said.

When he became old, Mięslowicz enjoyed discussions on liquid crystals. He was always very interested in what I could tell him about our results. I am happy that I was successful in persuading him to participate in the word liquid crystal conferences in Bordeaux and in Bangalore. Needless to say, he also present at the conference in Kraków in 1988. That was his last public appearance in the world liquid crystal community.