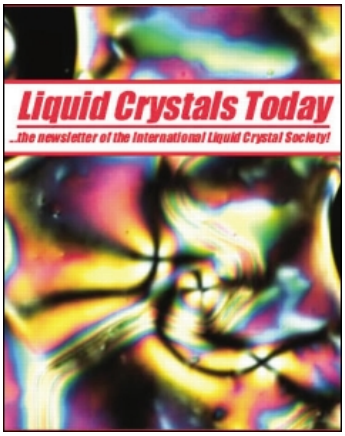


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# Russian Liquid Crystal Society awards first Freederiksz Medals

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# Society NEWS

# Russian Liquid Crystal Society awards first Freederiksz Medals

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Liquid Crystal Society 'Sodruzhestvo', which unites the scientists from CIS and some other countries has now instituted its highest award—the Freederiksz Medal. Its description and status were accepted after a heated debate by the Board of the Society on 20 December 1995.

Vsevolod Konstantinovich Freederiksz (1885–1944) was a founder of liquid crystal research in Russia. In 1924, when he was a well known scientist in the field of Solid State Physics and Theoretical Physics, he organized a group of researchers first in Petersburg University and then in Ioffe Physico-Technical Institute (A. N. Repiewa, V. V. Zolina, and later V. N. Tsvetkov and G.M. Mikhailov) and started research in liquid crystals. Before his arrest in 1936, Freederiksz and his co-workers revealed and investigated all basic effects, observed in nematics and smectics in the presence of electric and magnetic fields, such as reorientation (Freederiksz transition), electro-hydrodynamic instabilities (domain structures) and dynamic scattering of light. Freederiksz had a deep understanding of the nature of elastic forces in liquid crystals and made interesting proposals about the use of liquid crystals as lubricants to diminish the friction in mechanical constructions.

The Freederiksz Medal was set up as an award for outstanding contributions in the field of physics, chemistry and applications of liquid crystals. Members of the Liquid Crystal Society 'Sodruzhestvo' are eligible for the award, and additionally non-members may be eligible by special decision of the Board of the Society. The Freederiksz Medals are awarded by the Board of 'Sodruzhestvo' following proposals from the Scientific Councils of the Colleges and Universities, members of the Board, General Sessions of the Society members and former Freederiksz Medal winners. Annually no more than three awards are envisaged. Laureates become the honourable members of the Society and their annual membership fees are covered by the Society.

The first Freederiksz Medal award took place at the Board Meeting of 25 April 1997. The former Freederiksz student and collaborator Professor Viktor N. Tsvetkov (Russia) and the outstanding scientist Professor George W. Gray (UK) became the first Freederiksz laureates. Besides these, one of the medals was given forever to the family of Freederiksz by special decision of the Board.

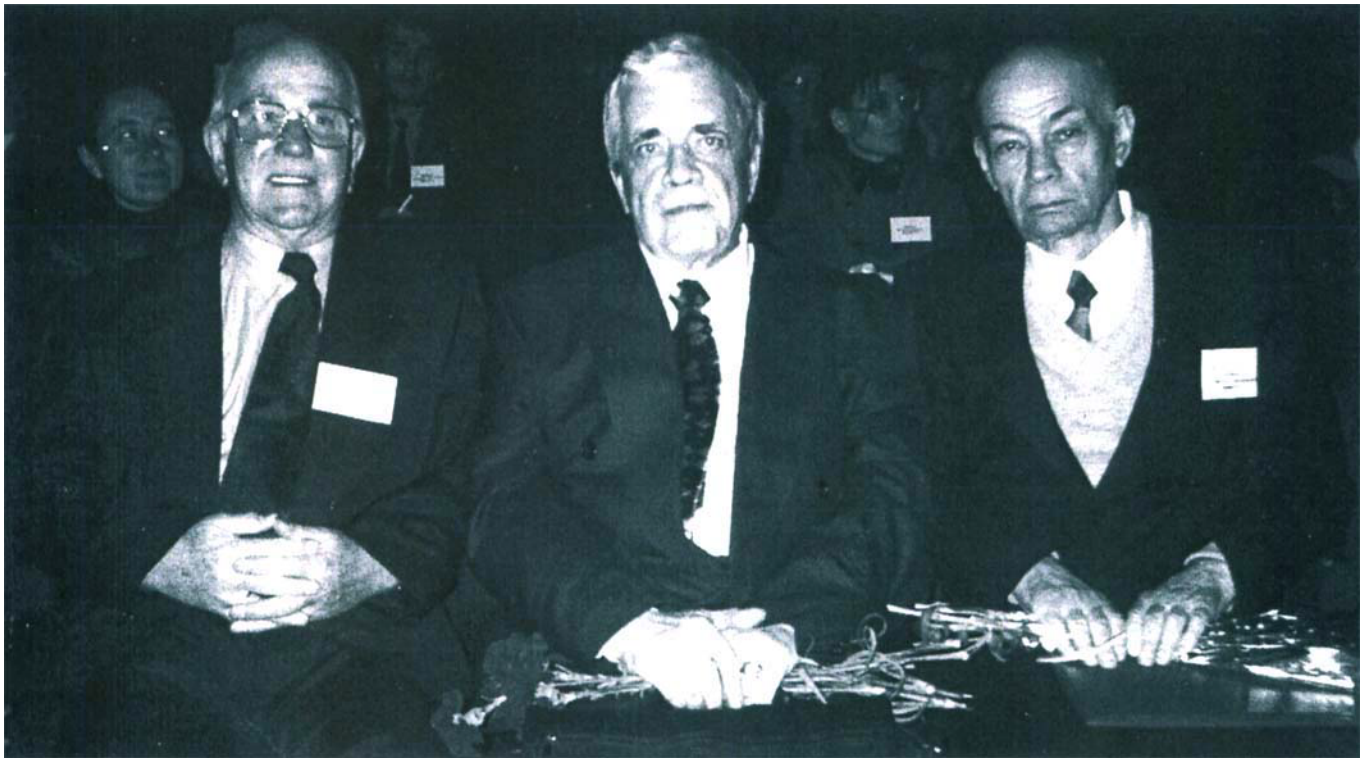

*Figure 1.* First Laureates of the Freederiksz Medal. From left to right — G. W. Gray, D. V. Freederiksz and V. N. Tsvetkov.

The two Laureates are well known scientists throughout the world. V. N. Tsvetkov carried out his first experiments investigating the effect of electric fields in nematics together with Freederiksz. He made detailed studies of orientational transitions in electric and magnetic fields. He performed 'classic' experiments, studying the effect of electric and magnetic fields on the apparent viscosity and dielectric anisotropy of liquid crystals. Professor Tsvetkov made a number of investigations in Liquid Crystal Optics (electro-optical Kerr phenomenon and light scattering), and Tsvetkov was the first who introduced the order parameter as a basic characteristic of liquid crystals.

The outstanding scientist Professor George Gray from the United Kingdom is well known as a founder of Liquid Crystal Chemistry. In view of his brilliant synthetic works a large variety of new mesomorphic compounds of different chemical classes were synthesized. The most impressive activity of Professor Gray was in the field of cyanobiphenyls, which was the beginning of the discovery of liquid crystal substances highly attractive for practical applications. He also made very important synthetic investigations of siloxane polymer liquid crystals. Professor Gray was the first who established the connection between the chemical structure of the substances and their ability to form liquid crystal phases.

The award ceremony of the first Freederiksz Laureates took place on 21 May 1997 during the second session of the Society in Peterhof near St Petersburg. The ceremony was in the Physical Institute of the St Petersburg University with participating scientists from Russia, Ukraine, Belorussia as well as Society members from Poland, Italy and Germany. After the first introductory remarks of Professor A.S. Sonin, who informed the audience on the life and activities of Freederiksz, the Chairman of the Society, Professor Pikin, presented the Medals and the Diplomas to the Laureates and the son of Vsevolod Konstantinovich Freederiksz—D. V. Freederiksz. The awarded scientists expressed their gratitude, and an important tradition was established.

*Figure 2.* Freederiksz Medal. The Medal depicts the portrait of V. K. Freederiksz, and the title 'Freederiksz Vsevolod Konstantinovich 1885–1944'. The back side of the Medal contains the writings (in Russian) 'Liquid Crystal Society 'Sodruzhestvo'' (encircled) and 'For outstanding contributions' (at the centre). The name of the awarded person is also inscribed.