



Research and Development of Glassy Liquid Crystals, Semiconductors, and Ceramics for Optoelectronics including Polarizers, Waveplates and Lasers

glassy liquid crystals

- non-absorption polarizers
- notch filters, mirrors
- reflective coloration
- photonic switching / memory

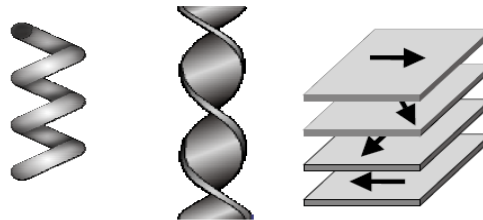
organic semiconductors

- polarized lasers
- field-effect transistors
- photoalignment polymers
- polarized light-emitting diodes

mesomorphic ceramics

- self-organized superstructures of nanoscale building blocks
- processing via lyotropic LCs
- robust waveplates, active and passive polarizers
- geometric surfactancy

Supramolecular Chiral Assemblies



Helical Coil Twisted Ribbon Helical Stack

Desired: Dark Eyes with One-Way Night Vision



Undesired: two-way night vision: eye-glow thanks to retro-reflection from *tapedum ligidum*

Ch-GLC film for selective transmission and reflection; prepared 1995; photo 2020



One-way CP Light Source

