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

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

[Supramolecular Chiral Assemblies]

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

Power of color-day camera in dark night

One-way CP Light Source

Unpolarized Incident

LCP

RCP

RH-CLC Stopband

A dye is doped to Absorb RCP

LCP

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