

Optical Document Security

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and Counterfeit Deterrence

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A preview

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Numbering
Tactility
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Fluorescence
Thermochromic
Iridescent
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Scrambled image

Foil printing

Metallic foil
Retroreflective foil

Iridescent foil
(OVD)

Diffractive
(DOVID)

Interference
(ISIS)

Learn about document security features and their security value

Fluorescence



Fluorescence



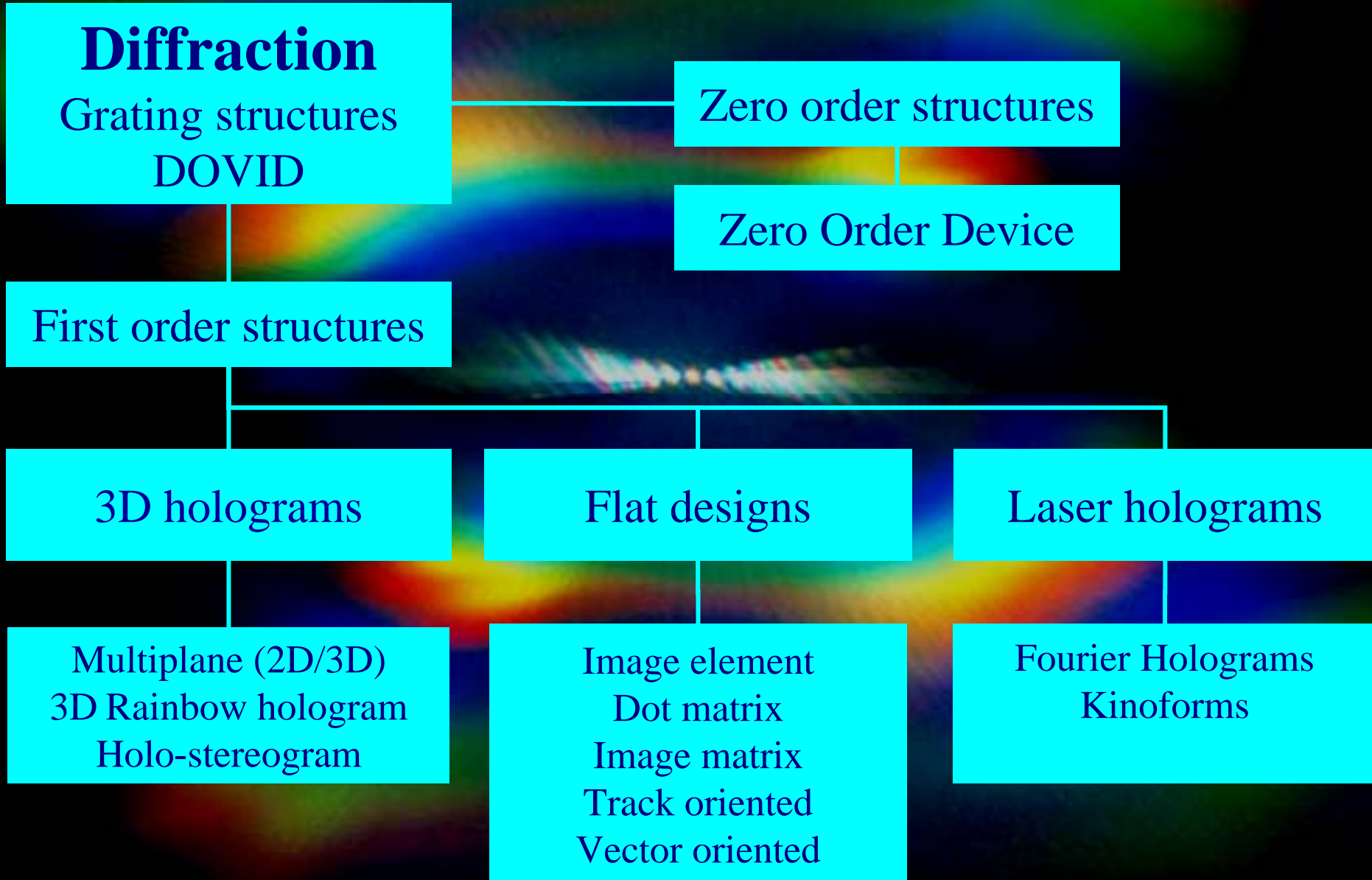
Polymer- and paper substrate security, security inks, printed security patterns, foil printing, optically variable devices (OVDs)

Learn about security printing techniques

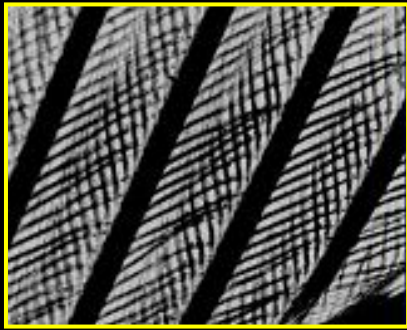
Intaglio printing, dry offset, wet offset, letterpress



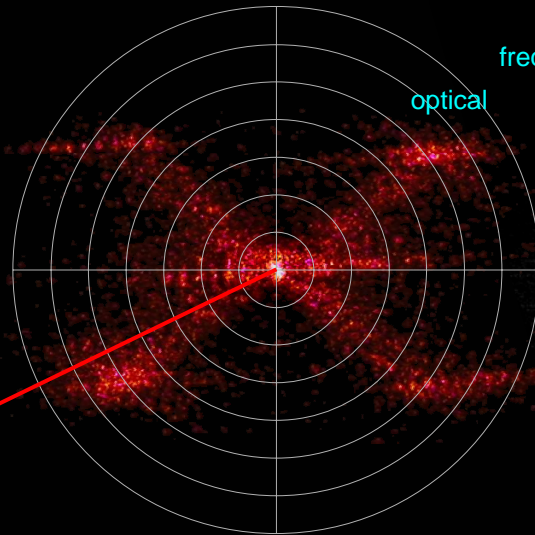
Understand diffractive security features



Distinguish spatial and frequency domains



spatial domain



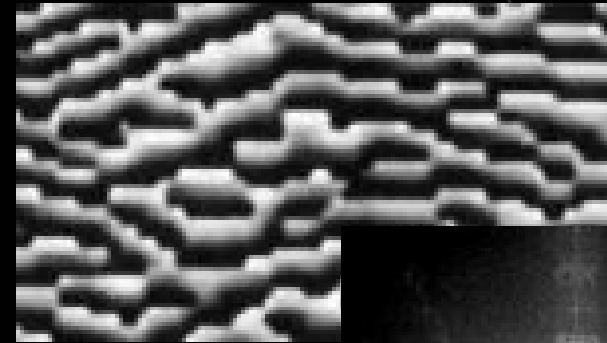
optical

frequency domain

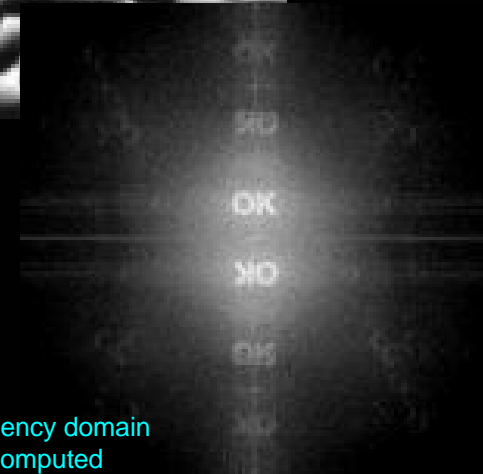
computed



- Diffraction
- First order structures
- Zero order structures
- Blazed gratings
- Grating cross sections



spatial domain
computed



frequency domain
computed

Learn about hidden diffractive features

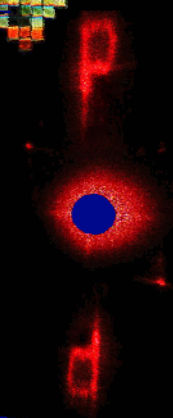
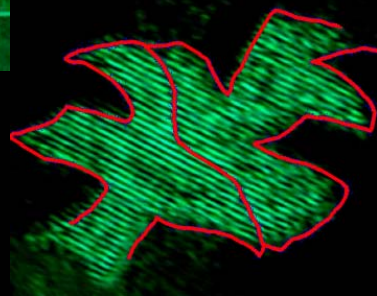
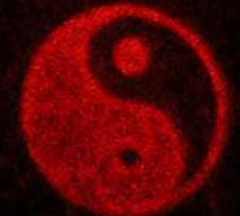
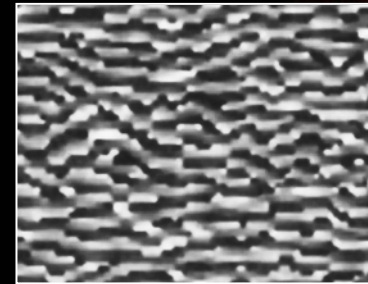
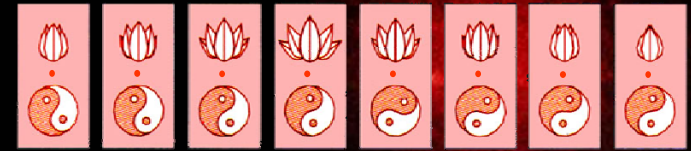
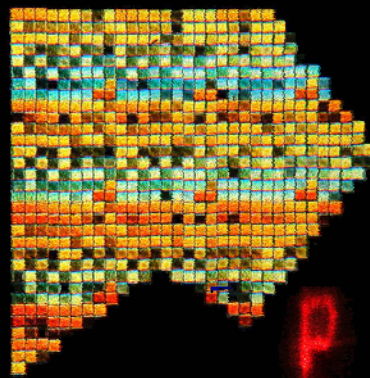
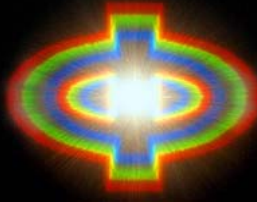
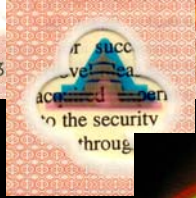


Fourier holograms

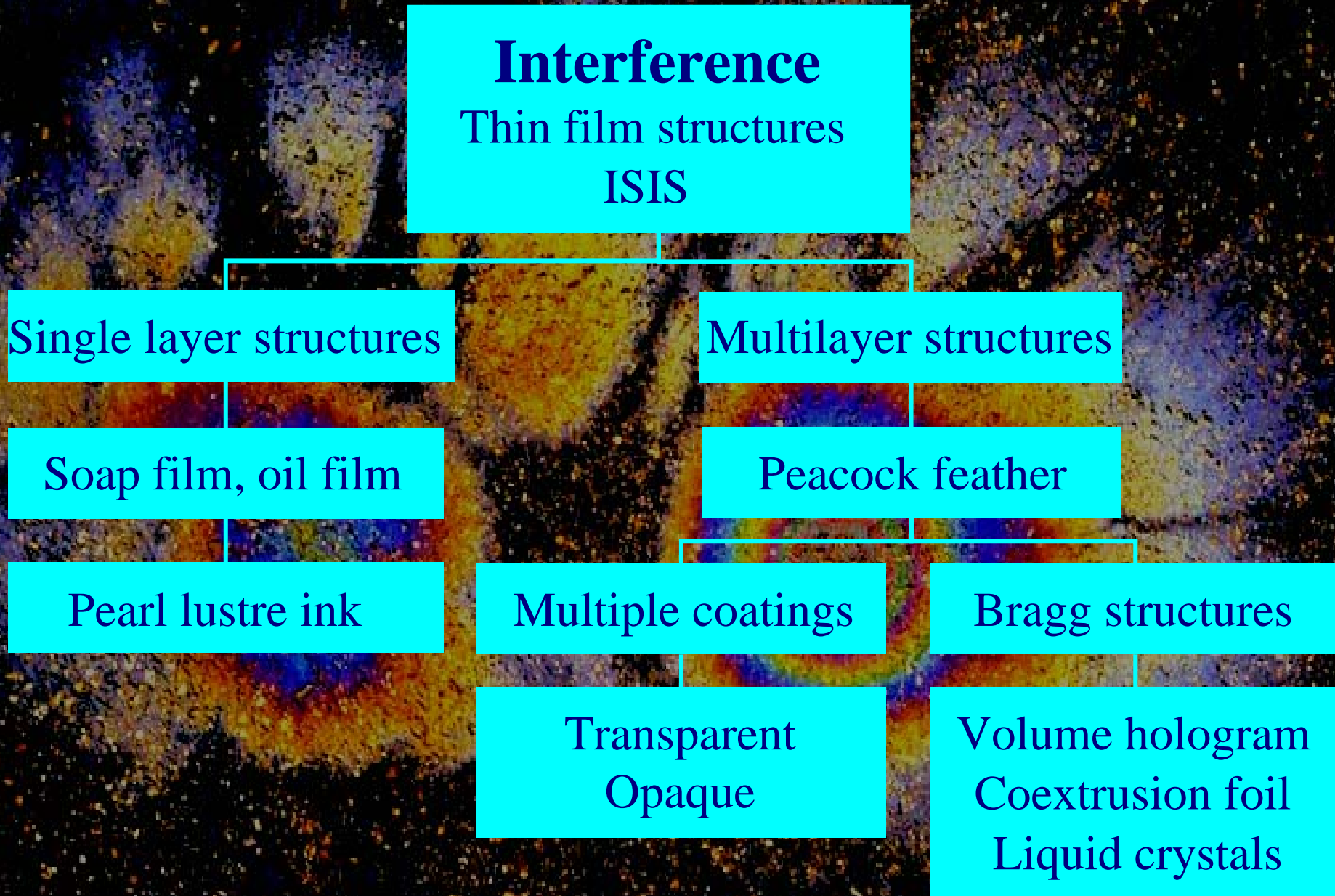
Kinoforms

Nano images

Pixel shaping

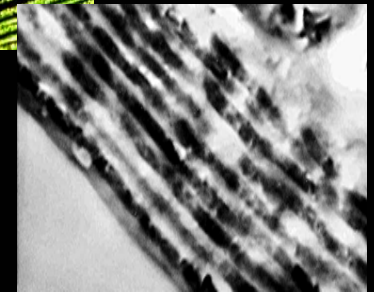
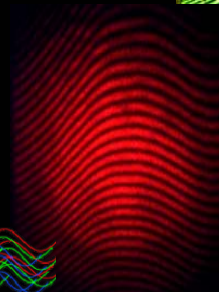
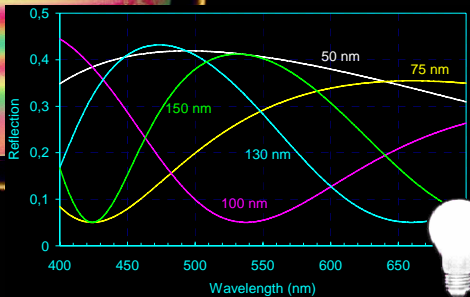
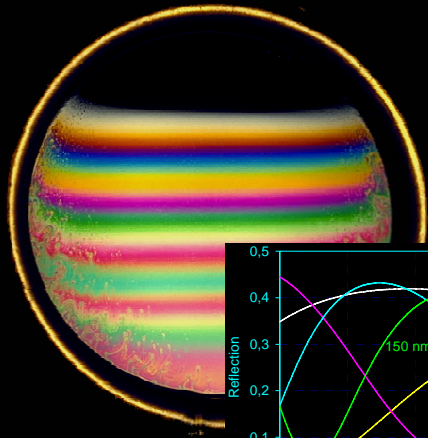
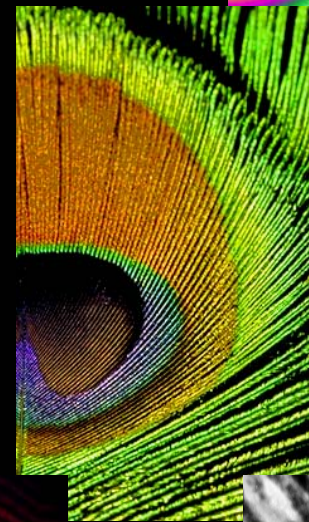
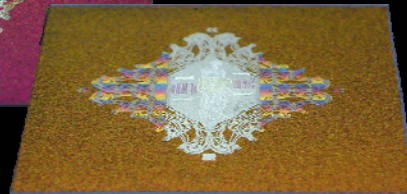


Understand interference security features

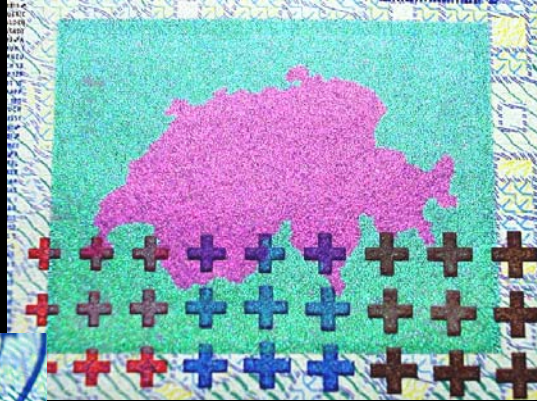
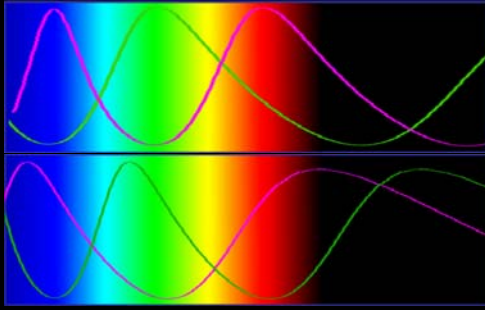


Learn about thin film structures

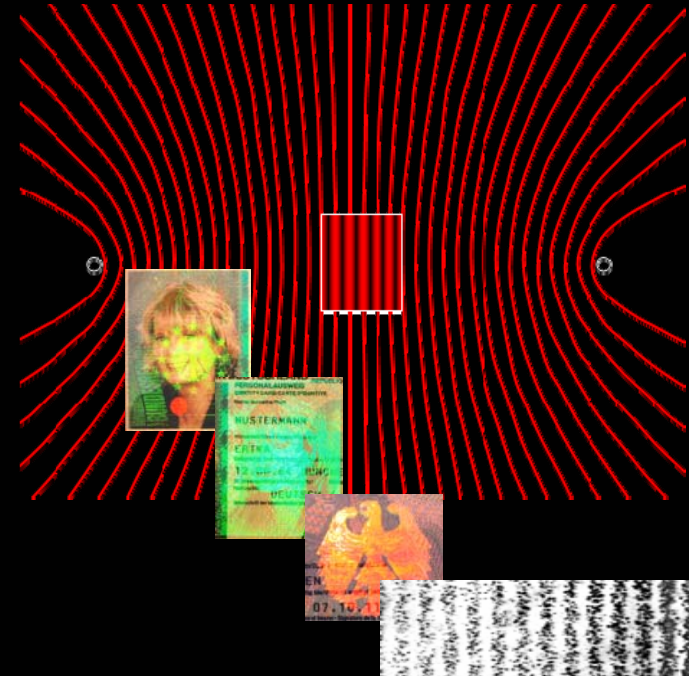
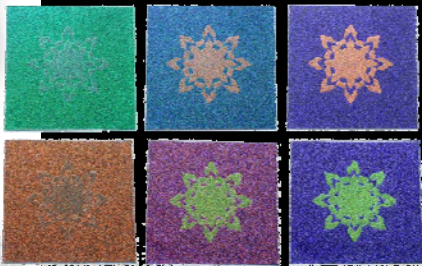
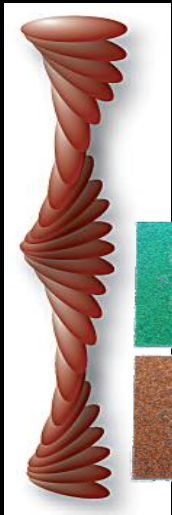
Pearl lustre ink
Light interference
Coherence length
Co-extruded foils
Combined features

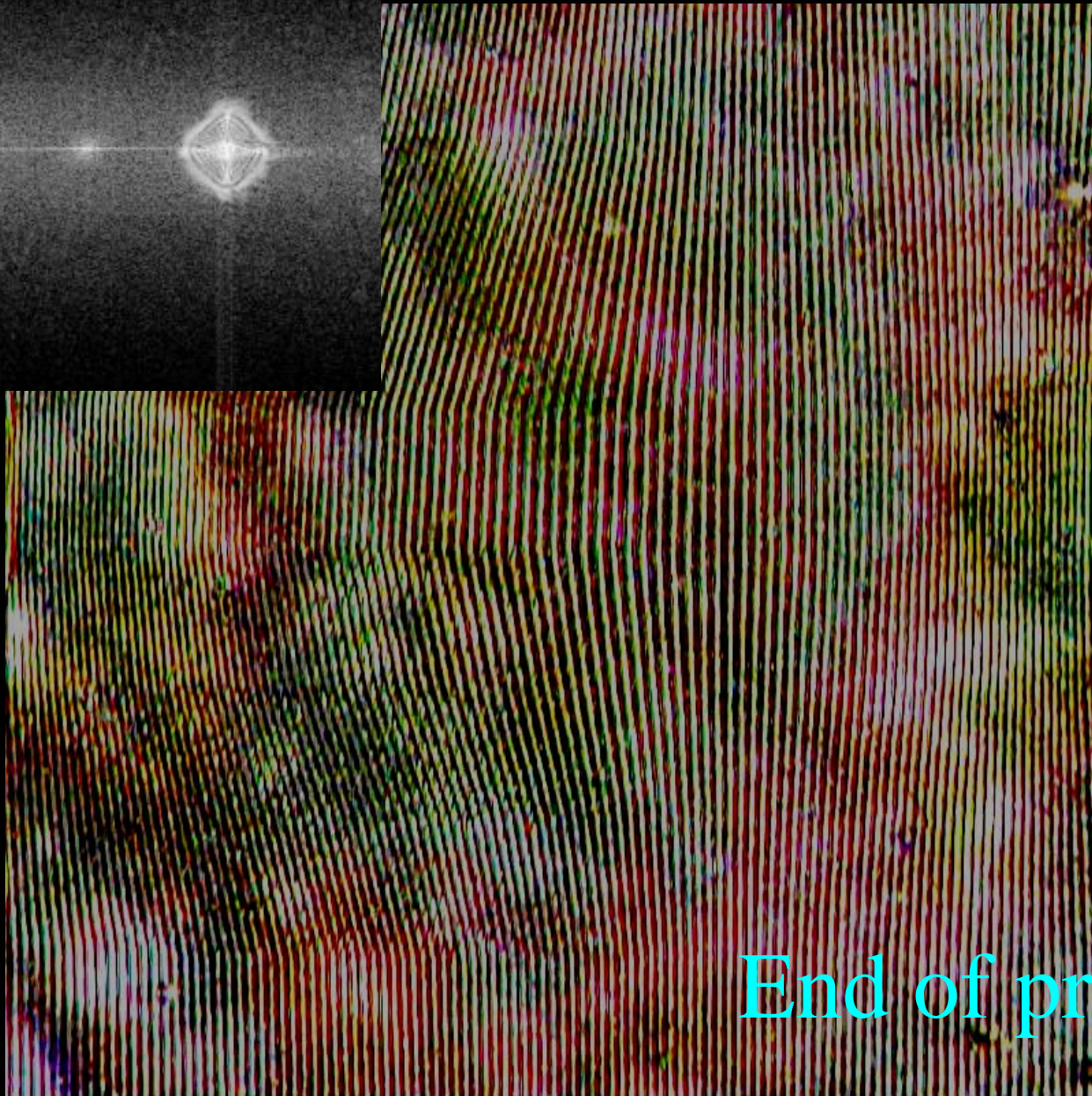


Learn about thin film structures



Optically Variable Ink
Volume holography
Lippmann photography
Liquid crystal features
Artificial opals





End of preview