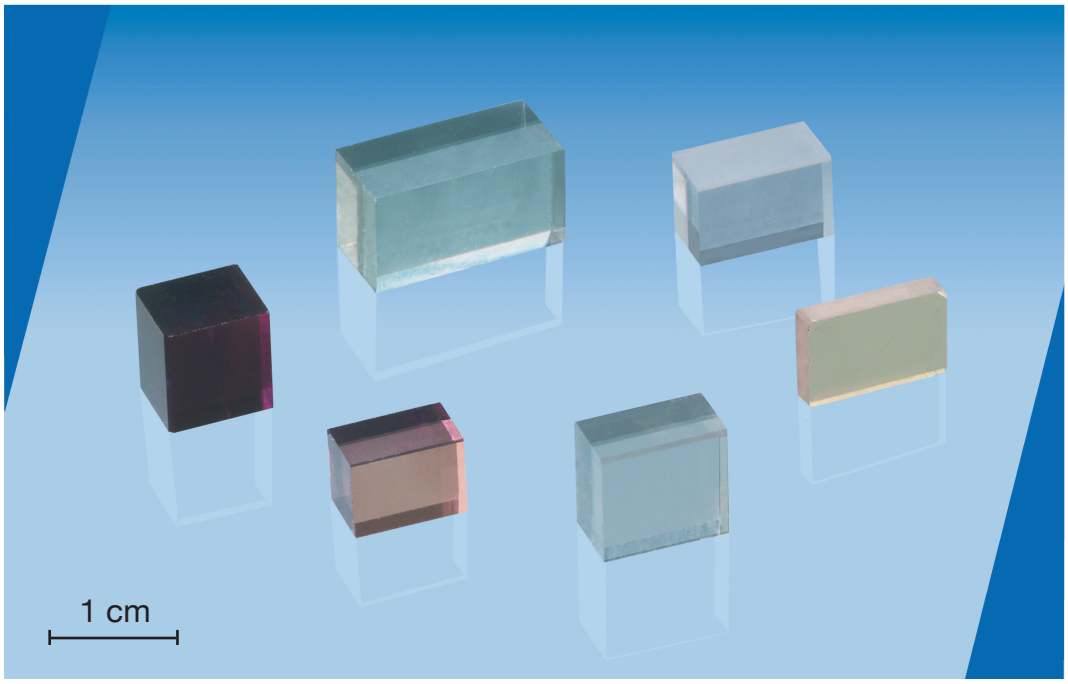
Rainbow Photonics

# Photorefractive $KNbO_3$




## Standard Features

- high quality crystals doped with Rh, Fe, Mn, and Ni for photorefractive applications in the infrared
- very low scattering losses

## Optional Features

- high photosensitivity up to 1000 nm wavelength
- milliseconds response time

## Applications

- photorefractive applications with laser diodes
- dynamic holography and optical phase conjugation in the visible and near infrared

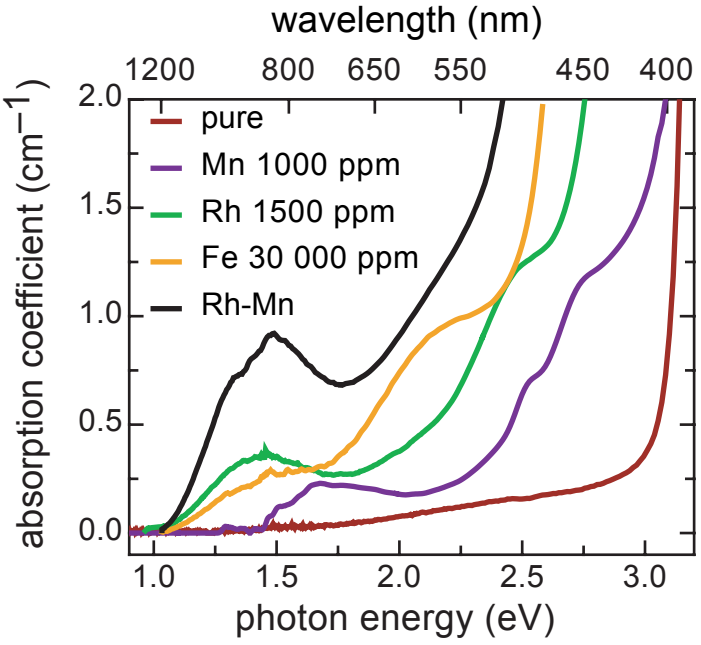
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## Photorefractive grating recording times

(selected $KNbO_3$ crystals at different wavelengths for I = 1 W/cm $^2$)

| Crystal | Wavelength [nm] | Recording time (typical) [s] |
|---|---|---|
| $KNbO_3$:Fe | 488 | 1 |
| $KNbO_3$:Mn | 515<br>860 | 1<br>3 |
| $KNbO_3$:Fe reduced | 488<br>515 | 0.01<br>0.01 |
| $KNbO_3$:Rh reduced | 860<br>1064 | 0.5<br>50 |

## Absorption Spectra




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