High Quality TeO$_2$ for Acousto-Optics devices

**TeO$_2$ Features**
- Wide transmittance range: 350nm - 5000nm
- High refractive index:
  \[ \text{no} = 2.26, \text{ne} = 2.412 \text{ @633nm} \]
- High figure of merit ($M^2 = 10^{-8} S^3/g$): 795
  
  [Silica] 1, [PbMo$_4$] 36

**Applications**
- Acousto-Optics devices (AO Tunable Filter, AO Modulator, AO Deflector, AO Q-switch)

**Oxide TeO$_2$ Features**
- High damage threshold (15J/cm$^2$)
- Low absorption @1064nm, 532nm
- Non OH absorption @IR range
- Low absorption @UV-blue range
- 7 times higher damage threshold compared to conventional crystals!
- 2 times less absorption @532nm
- 7 times less @1064nm

*Tested by Institute for Laser Technology*  
*Test Method: N-on-1*  
*Wavelength: 1064 nm*  
*Pump: 1064nm & 532nm CW 1W*  
*Beam waist: $\phi$70 $\mu$m*

**Measurement condition**
- *Probe: 633nm CW 1W*
- *Chopping frequency: 420 Hz*  
- *Beam waist: $\phi$70 $\mu$m*

**OXIDE**

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