

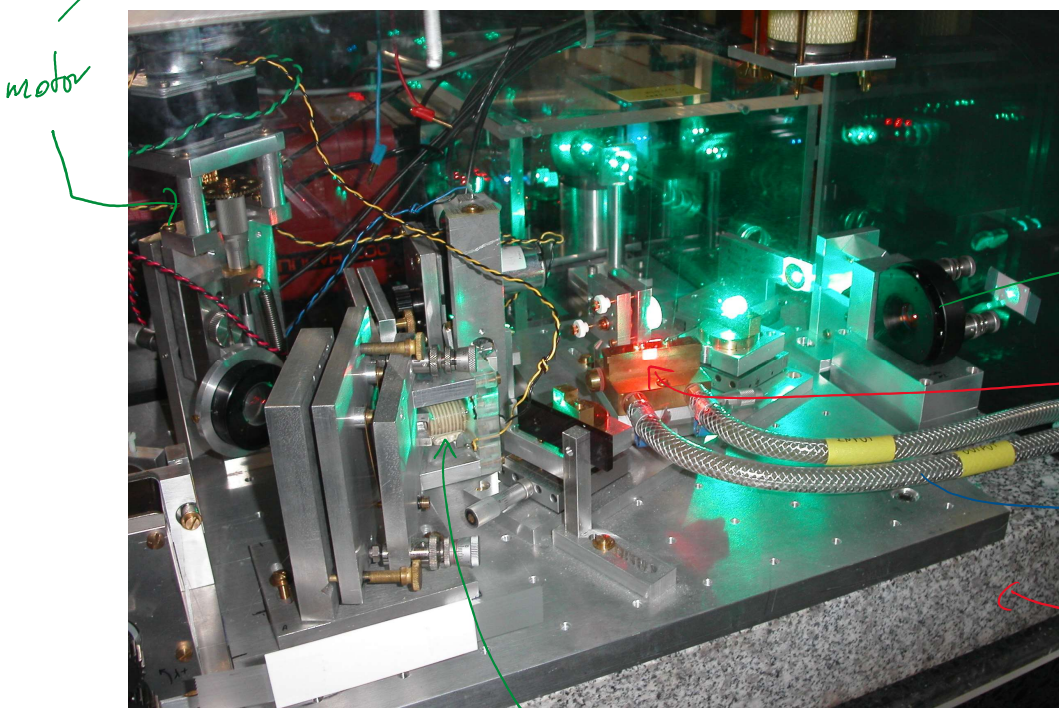
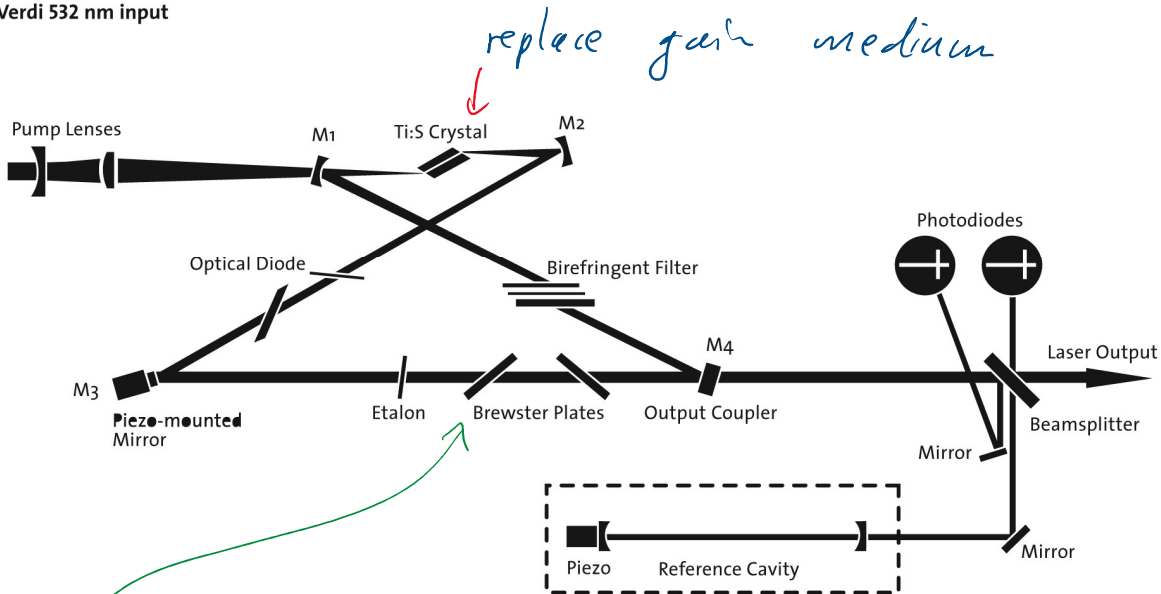
Dye lasers

↳ "Farbstoff" in a solvent

↓
toxic
(cancerogenous)
+ explosive / flammable

Optical Schematic of the MBR-110 Ti:Sapphire Laser

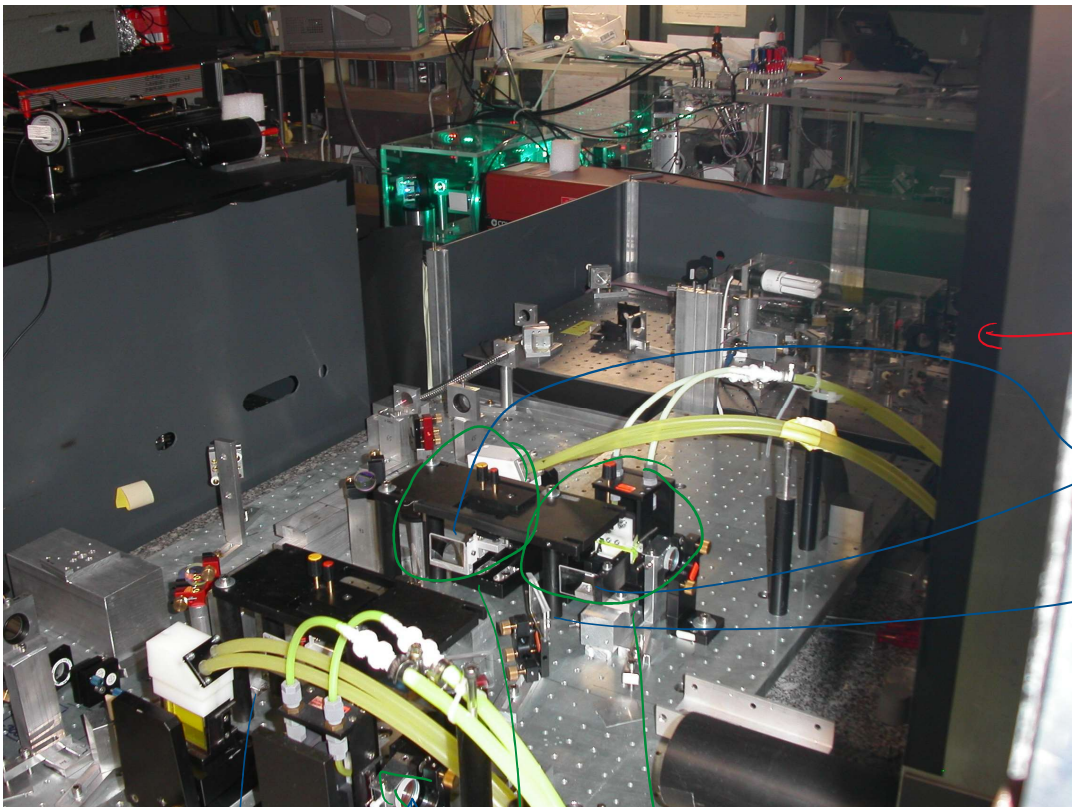
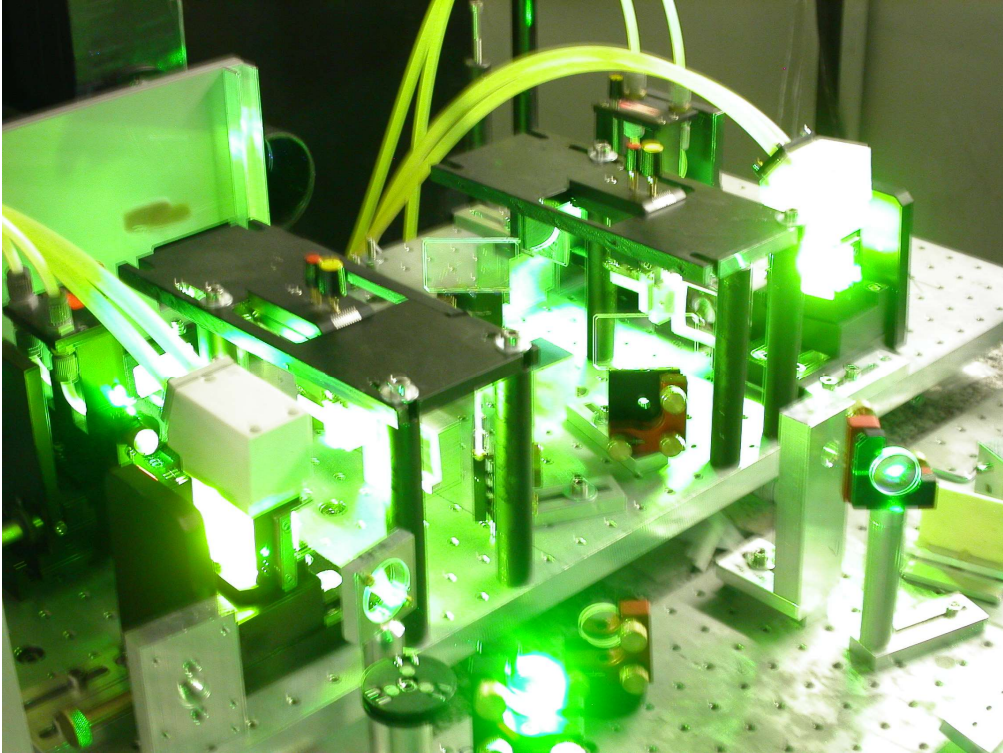
Verdi 532 nm input





piezo of etalon

Dye laser



TiSa laser
pumped by dye

cylindrical
lens

Beam splitter &
mirror



2 osc. + amplifiers

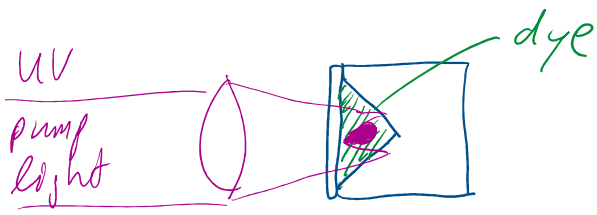
OC

HR dye

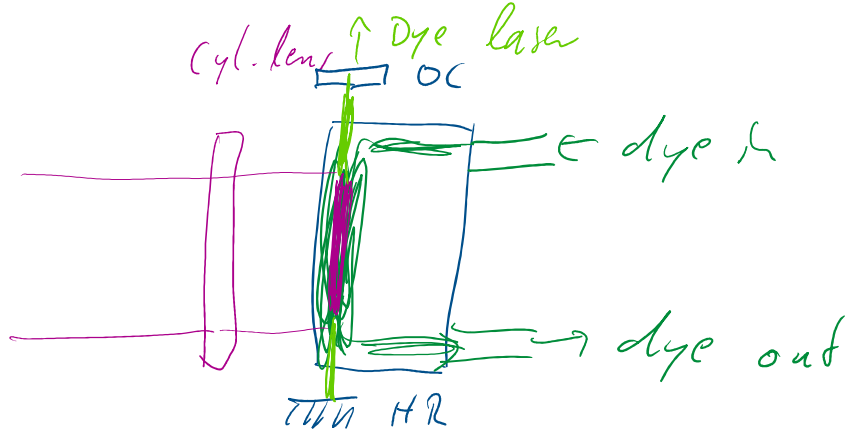
OSC.

amp.

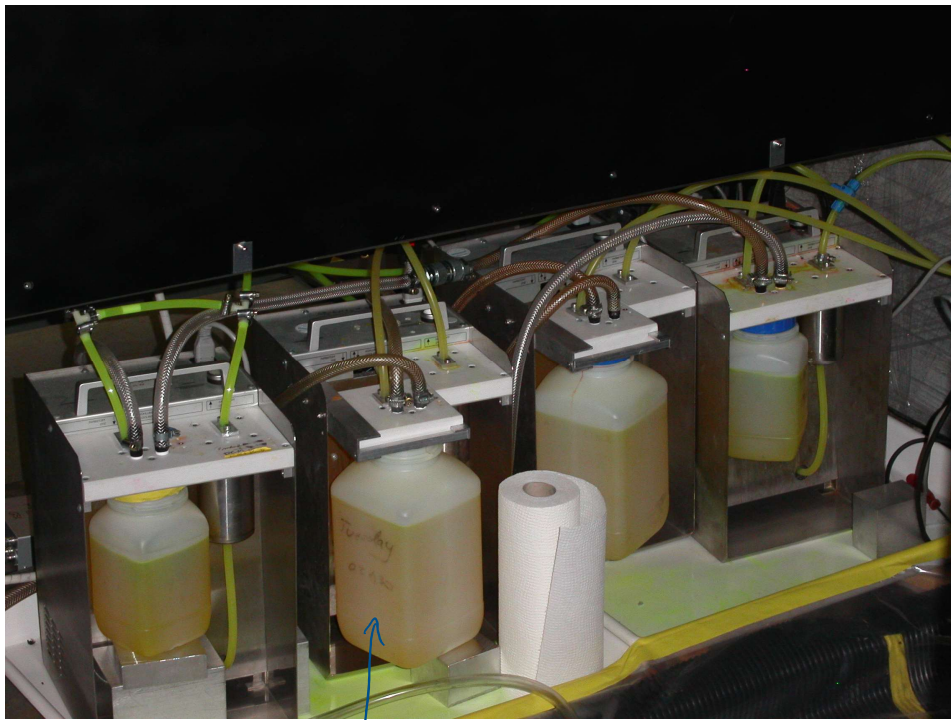
XeCl Excimer lasers
 ↑
 excited dimer
 Xe^+Cl
 308nm (UV)



looking into dye laser



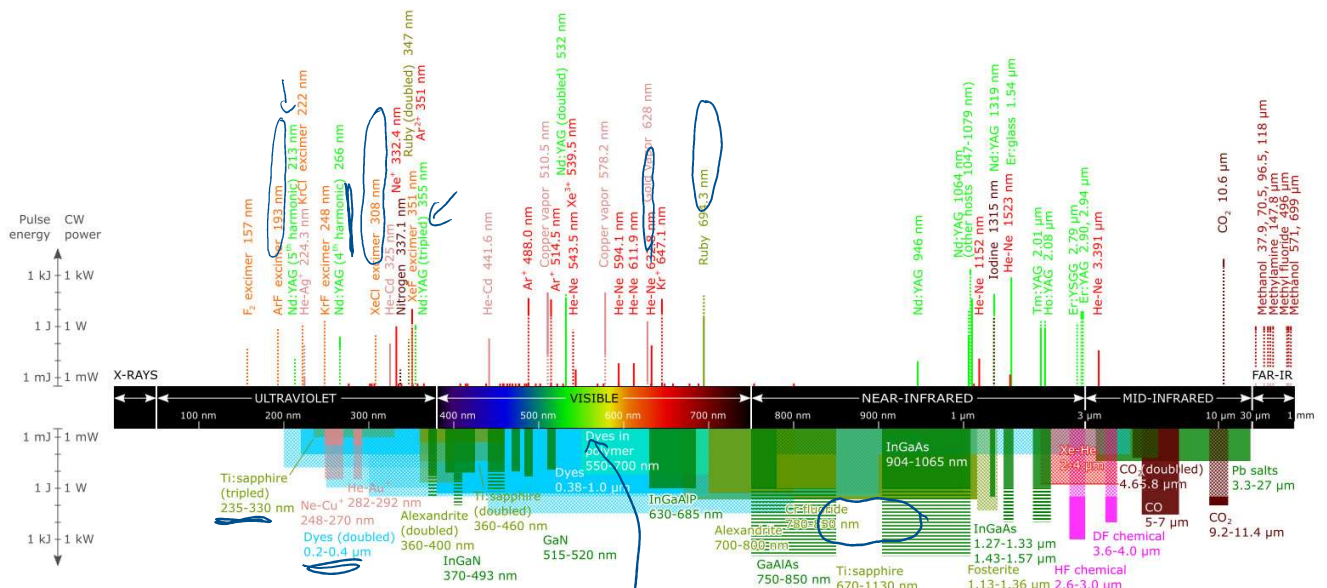
Dye: organic molecule
 broad emission spectrum
 (similar to Ti:sapphire)



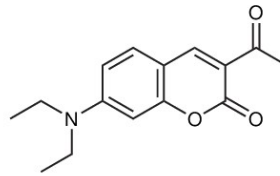
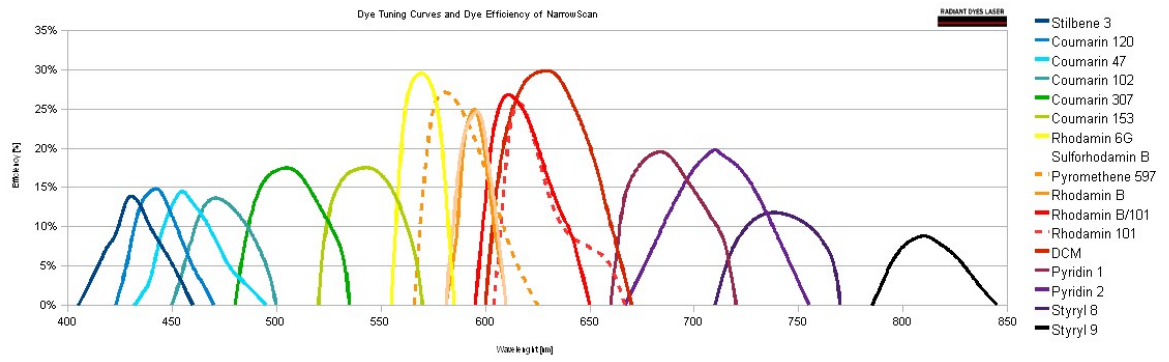
Dye pumps

dak

We had to replace 25L of dye solution every 8 hours

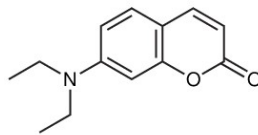


dye lasers cover all of the visible + NIR

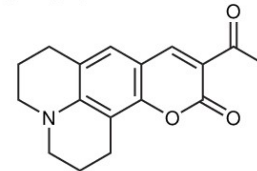


3-acetyl-7-(diethylamino)-
2H-1-benzopyran-2-one

(1)



coumarin 110



coumarin 334