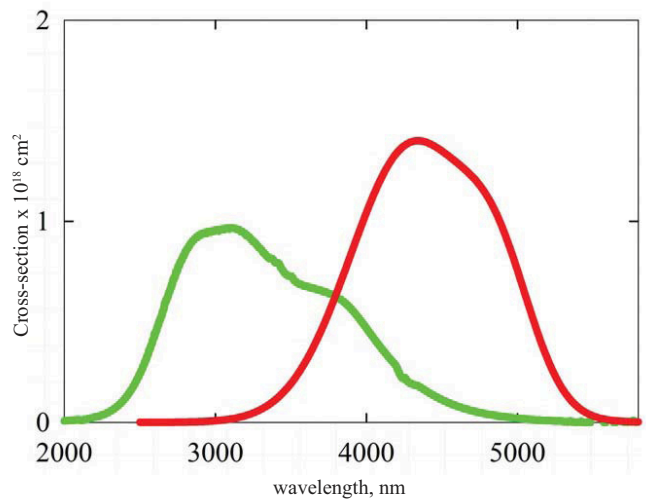
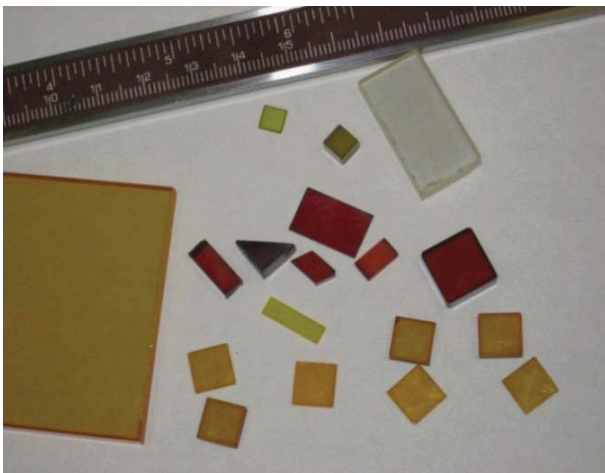


## Fe<sup>2+</sup>:ZnSe Laser Active Materials

Fe<sup>2+</sup>:ZnSe crystals are ideal gain materials for room temperature gain-switched lasers tunable over 3.9-5.1  $\mu\text{m}$  spectral range.

These lasers are promising for spectroscopy, sensing, medical and defense related applications, as well as for seeding or pumping middle-infrared optical parametric oscillators.

IPG's fabrication process allows low cost mass production of a large variety of diffusion-doped Fe<sup>2+</sup>:ZnSe/ZnS crystals with low losses, uniform distribution of iron, good reproducibility and reliability.



### State-of-the-art Fe:ZnSe Laser Characteristics

Laser Characteristics	Output Parameter
Pulsed @ 77 K, Energy, mJ	420
Pulsed, Efficiency, %	43
Microchip gain-switched @ 300 K, Energy, $\mu\text{J}$	1 @ 5 ns
Gain-switched @ 300 K, Energy, mJ	5 @ 20 ns
Pulsed, Efficiency @ 300 K, %	20
Gain-switched @ 300 K, Tunable Range, nm	3950-5050

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