

## Budget Justification

### Supplies:

1. gas cabinet	\$2,000	needed to contain leaks from fluorine gas bottle and mixing manifold, cost based on recent purchase of similar item by Prof. Barry Wells.
2. vacuum parts	\$2,000	gas volume in excimer laser must be evacuated before laser gas injection, cost based on number of valves and vacuum fittings that might be corroded.
3. translation stage	\$3,000	needed to hold sample and move it across the beam, cost based on recent purchase of similar item by Prof. Ed Eyer.
4. optics and supports	\$4,000	needed to support the laser beam optics and translation stage, (not a full optical table) cost based on prices in Thorlabs catalog.
5. consumable supplies	\$2,500	vacuum pump oil, gas for filling the laser before operations, and plumbing supplies for the ventilation system.
<b>Total request:</b>	<b>\$13,500</b>	

## Cost Share

### Technician salary:

1. The PI has support in his operating grant (National Science Foundation 2009-2012, \$325,000) for student and technician labor \$7000/year. He will devote \$5000 from this grant to cover 10 person-weeks of labor at \$10/hour to carry out the laser refurbishment.

**Total cost share: \$5000**

**Total project cost: \$18,500**