Requirements for SHG Measurements

Prof. Halasyamani's Group (psh@uh.edu)

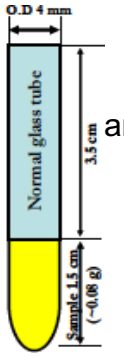
1. **We can do measurements at 1064nm and 2.09μm. Please let us know which wavelength(s) you would like measurements.**

2. **You want to know whether or not your sample is SHG active.**

We need at least 150 mg of powder. If you send us a crystal, we will grind the crystal into a powder. Please remember that with this measurement – a single sample – the SHG efficiency is only approximate.

3. **You want us to do a phase-matching measurement, SHG vs. particle size.**

- 1064nm:
    - We would prefer that you sieve your sample into different particle sizes, <20, 20-45, 45-63, 63-75, 75-90, 90-125 μm. The samples need to put in separate fused silica tubes with 4mm o.d. (see Figure) for 1064nm measurements.



and

- 2.09μm
    - As with the 1064nm measurements, please sieve your sample into different particle sizes. Each particle size needs to have at least 150mg of powder. Please send us these in different containers, so we may put them in our sample holders.

4. **If your sample is air and/or moisture sensitive.**

- 1064nm
    - Please send us your sample in a sealed, 4mm o.d., fused silica tube (see figure below). You will need to do all of the sieving yourself, if you want a phase-matching curve, and send us several tubes.

- 2.09 μm
    - Please email Prof. Halasyamani (psh@uh.edu) to discuss these measurements.

Please mail samples to:

Dr. Yunseung Kuk
Department of Chemistry, University of Houston
3585 Cullen Blvd. 112 Fleming Building
Houston, TX 77204---5003
United States of America
Please use Fed---Ex, DHL, etc. --- something with a tracking number--- when sending samples.
Please let us know if you want your samples back.

Also, please send an e-mail to psh@uh.edu and ykuk@central.uh.edu indicating samples have been mailed. Our 'turn-around' time for data is typically two weeks. If the situation is urgent, please e-mail me and we will do our best to accommodate you.

Thanks!