

## Laser-pulled robust spray emitters and empty columns for self-packed columns

- Tried and true fused silica emitters for nanoLC-MS laser-pulled with proprietary methods
- Very short taper 0.5-0.8 mm, mechanically strong, robust spray
- Large flow-rate range from nL/minute to >uL/minute
- The default tip opening i.d. is ~8-10 um for emitters and empty capillaries for packing columns. Tip openings of 1 um, 5 um, 10 um, 15 um i.d. and 20-30 um for empty self-packed columns are available.
- Low cost
- Gold tip coating available

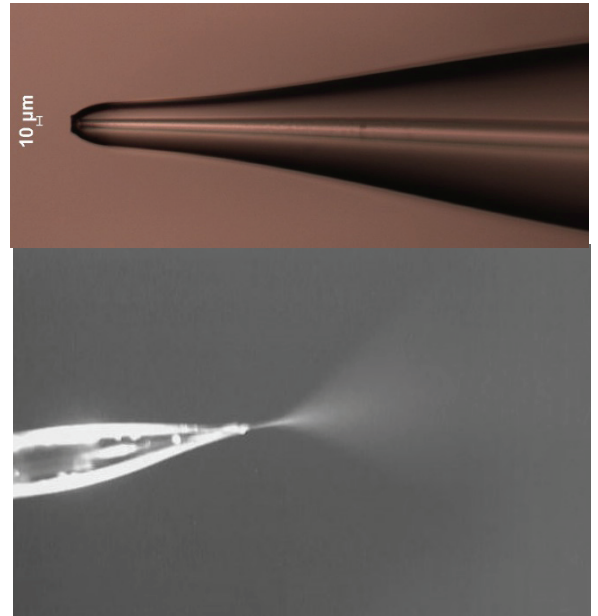
### Model numbers - Emitters

PST-seTip-xx-yy, xx=i.d. of 20 um, 25 um, 50 um, 75 um, 100 um, yy=length 5, 10 cm

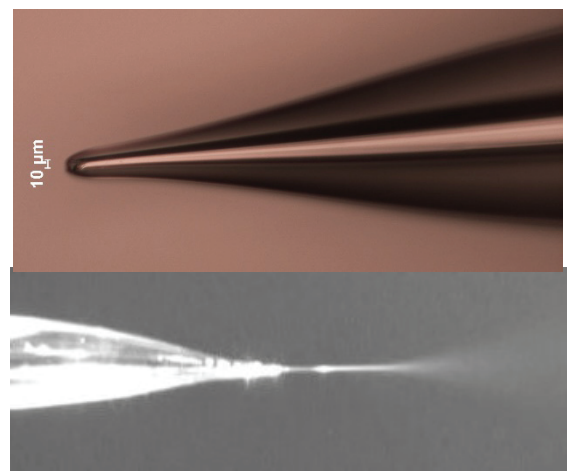
Gold-coated emitters: PST-seg-xx-yy

### Model numbers - Empty Columns

PST-seFrit-zz-yy, zz= i.d. 20, 25, 50, 75, 100 um; yy=length: 20cm to 100 cm, please specify.



20 um i.d., 360 um o.d. emitter showing ~10 um i.d. tip opening and very short tapered channel from 20 um to 10 um over 0.6 mm. Spray: MeOH/H<sub>2</sub>O, 500 nL/min. 2.3 KV



75 um i.d. capillary pulled to a 15 um tip i.d. over ~0.6 mm. The spray was for MeOH at 3.3 KV and 3 uL/min/