

## Instrumentation Services Pricing

**Important:** All users must follow the CINS Facility Rules and Guidelines. In general, users must provide consumables.

| Instrument Usage Hourly Rates              |                                                                                          |          |                       |          |                                  |          |                                      |          |
|--------------------------------------------|------------------------------------------------------------------------------------------|----------|-----------------------|----------|----------------------------------|----------|--------------------------------------|----------|
|                                            | Academic in State                                                                        |          | Academic Out of State |          | Industrial in State <sup>1</sup> |          | Industrial Out of State <sup>1</sup> |          |
| Instrument                                 | Staff assisted                                                                           | Self use | Staff assisted        | Self use | Staff assisted                   | Self use | Staff assisted                       | Self use |
| JEOL 2100F TEM <sup>2</sup>                | \$90                                                                                     | \$60     | \$120                 | \$80     | \$250                            | \$180    | \$480                                | \$240    |
| JEOL 7000F SEM                             | \$80                                                                                     | \$45     | \$100                 | \$60     | \$200                            | \$150    | \$420                                | \$210    |
| Bruker Discover D8 XRD                     | \$80                                                                                     | \$45     | \$100                 | \$60     | \$200                            | \$150    | \$420                                | \$210    |
| Horiba LabRam 800 Raman                    | \$90                                                                                     | \$60     | \$120                 | \$80     | \$200                            | \$150    | \$420                                | \$210    |
| Bruker-Icon AFM <sup>3</sup>               | \$50                                                                                     | \$35     | \$70                  | \$45     | \$150                            | \$90     | \$360                                | \$180    |
| Keysight Nano Indenter G200 <sup>3</sup>   | \$60                                                                                     | \$40     | \$75                  | \$50     | \$200                            | \$100    | \$360                                | \$180    |
| Shimadzu UV-3600 UV/Vis/NIR <sup>4</sup>   | \$50                                                                                     | \$35     | \$70                  | \$45     | \$150                            | \$90     | \$360                                | \$180    |
| Thermo Scientific K Alpha XPS <sup>5</sup> | \$80                                                                                     | \$45     | \$100                 | \$60     | \$200                            | \$150    | \$420                                | \$210    |
| Mettler-Toledo TGA/DSC                     | \$50                                                                                     | \$35     | \$70                  | \$45     | \$150/90                         | \$100/60 | \$360/180                            | \$180/90 |
| Ultramicrotome                             | \$50                                                                                     | \$35     | \$70                  | \$45     | \$200                            | \$150    | \$360                                | \$180    |
| Mechanical Compression                     | \$60                                                                                     | N/A      | \$75                  | N/A      | \$150                            | N/A      | \$360                                | N/A      |
| Gel Permeation Chromatography <sup>6</sup> | \$150 minimum fee (includes 5 samples); \$20 per additional sample (staff-assisted only) |          |                       |          |                                  |          |                                      |          |
| Ethylene Oxide Sterilizer                  | \$500/run (staff-assisted only)                                                          |          |                       |          |                                  |          |                                      |          |
| Customer Assistance <sup>7</sup>           | \$100                                                                                    |          | \$120                 |          | \$150                            |          | \$200                                |          |

| Instrument Usage Per Sample Rates <sup>8</sup> |                                                                                          |                                      |
|------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------|
| Micromeritics ASAP 2020                        | Surface area analysis                                                                    | \$100 (assisted) or \$65 (self-use)  |
| Micromeritics ASAP 2020                        | Surface area analysis + full scale adsorption/desorption isotherm and pore size analysis | \$250 (assisted) or \$150 (self-use) |
| Micromeritics AutoPore 9620                    | Mercury porosimetry analysis (approx. 1000 um to 4 nm pore size; sample dependent)       | \$275 (assisted) or \$175 (self-use) |

| Minimum required training hours <sup>9</sup> |        |
|----------------------------------------------|--------|
| JEOL 2100F TEM <sup>2</sup>                  | 15 hrs |
| JEOL 7000F SEM                               | 10 hrs |
| Bruker Discover D8 XRD                       | 8 hrs  |
| Horiba LabRam 800 Raman                      | 12 hrs |
| Bruker-Icon AFM <sup>3</sup>                 | 8 hrs  |
| Keysight Nano Indenter G200 <sup>3</sup>     | 8 hrs  |
| Shimadzu UV-3600 UV/Vis/NIR <sup>4</sup>     | 6 hrs  |
| Thermo Scientific K Alpha XPS <sup>5</sup>   | 12 hrs |
| Mettler-Toledo TGA/DSC                       | 4 hrs  |
| Ultramicrotome                               | 12 hrs |

**Note:** Initial training is required for all new users. The above minimum hours are a general guide for calculating charges and may not reflect actual required hours. Additional charges may accrue before a trainee can be certified to use an instrument alone.

**Important:**

- Customers who are paying via federal funding are billed the academic in-state rate.
- If data analysis is required, customer assistance fees will be charged for the analysis time.

**Footnotes:**

- Industrial users must complete cost estimate agreement.
- Prerequisites exist for graduate students to be trained on TEM. Users must prepare their own specimens. The TEM minimum required training hours do not include specimen preparation training. No undergraduate students may be trained on TEM.
- Users must provide their own probes.
- Additional training needed for Integrated Sphere.
- Ultra-high vacuum training needed.
- Minimum fee includes polystyrene standards (580 – 1M mol wt) and up to 5 customer samples. Pricing includes routine sample preparation and analysis. Special needs will be

- (cont.) discussed with customers, with pricing estimates provided in advance.
- Hourly fee for customer assistance beyond standard data acquisition, sample preparation, etc. Fee estimates will be provided to customers upon discussion of specific needs.
- Staff assistance may be required to prepare samples for these instruments—see footnote 7. Training for self-use requires running samples in each instrument over the course of at least 3 days (typically 4-6 samples for BET and 10-14 samples for Hg Intrusion).
- The customer assistance fee is charged per hour of training.