

PF : Advanced Characterization Nanotechnology Platform
 OE: Owned Equipment(Voluntary operation)

Tech. Asst. : Assistance
 Tech. Subst. : Technical Substitute
 Eqpt. Util. : Equipment Utilization

▶ TEM/STEM

unit of price : JPY

| Equipment | Category | Per Rate | Basic Unit Price | Utilization Form | Coefficient Number | Amount | Note |
|---|----------|----------|---|------------------|--------------------|-------------------------------------|---|
| Environment-Adapted Scanning Transmission Electron Microscope JEM-ARM200F Cold FE(JEOL) | PF | Per day | 60,000 | Eqpt. Util. | 1 | 60,000 | — |
| | | | | Tech. Asst. | 2 | 120,000 | |
| | | | | Tech. Subst. | 5 | 300,000 | |
| Atomic-resolution Element Mapping Diffractometer JEM-ARM200F Thermal FE(JEOL) | PF | Per day | 30,000 | Eqpt. Util. | 1 | 30,000 | — |
| | | | | Tech. Asst. | 2 | 60,000 | |
| | | | | Tech. Subst. | 5 | 150,000 | |
| Ultrahigh Resolution STEM for light element imaging JEM-ARM200F Cold FE(JEOL) | PF | Per day | 36,000 | Eqpt. Util. | 1 | 36,000 | — |
| | | | | Tech. Asst. | 2 | 72,000 | |
| | | | | Tech. Subst. | 5 | 180,000 | |
| Transmission/Scanning Type Electron Microscope JEM-2800(JEOL) | PF | Per day | 22,000 | Eqpt. Util. | 1 | 22,000 | — |
| | | | | Tech. Asst. | 2 | 44,000 | |
| | | | | Tech. Subst. | 5 | 110,000 | |
| Ultrahigh Resolution Transmission Electron Microscope JEM-ARM200F Thermal FE (JEOL) | PF | Per day | 30,000 | Eqpt. Util. | 1 | 30,000 | — |
| | | | | Tech. Asst. | 2 | 60,000 | |
| | | | | Tech. Subst. | 5 | 150,000 | |
| Cryogenic Transmission Electron Microscope JEM-2100F(JEOL) | PF | Per day | 20,000 Cryo observation +5,000, EDS/EELS +2,000 | Eqpt. Util. | 1 | Basic unit price Integration × 1 | Adjustment cost for cryo sample : 1,000yen/2hours/ 1unit Beginners training will be charged. (same fee as Tech.Asst.) |
| | | | | Tech. Asst. | 2 | Basic unit price Integration × 2 | |
| | | | | Tech. Subst. | 5 | Basic unit price Integration × 5 | |
| Bio Material High Contrast Electron Microscope JEM-1400(JEOL) | PF | Half day | 4,000 | Eqpt. Util. | 1 | 4,000 | — |
| | | | | Tech. Asst. | 2 | 8,000 | |
| | | | | Tech. Subst. | 5 | 20,000 | |
| Atomic Resolution Ultrahigh Voltage Electron Microscope JEM-ARM1250(JEOL) | PF | Per day | 50,000 | Eqpt. Util. | 1 | 50,000 | — |
| | | | | Tech. Asst. | 2 | 100,000 | |
| | | | | Tech. Subst. | 5 | 250,000 | |
| High Resolution Transmission Analysis Electron Microscope JEM-4010(JEOL) | PF | Per day | 12,000 | Eqpt. Util. | 1 | 12,000 | — |
| | | | | Tech. Asst. | 2 | 24,000 | |
| | | | | Tech. Subst. | 5 | 60,000 | |
| High Resolution Analysis Electron Microscope JEM-2010F(JEOL) | PF | Per day | 12,000 | Eqpt. Util. | 1 | 12,000 | — |
| | | | | Tech. Asst. | 2 | 24,000 | |
| | | | | Tech. Subst. | 5 | 60,000 | |
| High Contrast Transmission Electron Microscope JEM-2010HC(JEOL) | PF | Per day | 3,000 | Eqpt. Util. | 1 | 3,000 | — |
| | | | | Tech. Asst. | 2 | 6,000 | |
| | | | | Tech. Subst. | 5 | 15,000 | |
| High Resolution Top Entry Type Transmission Electron Microscope JEM-2000EX II (JEOL) | PF | Per day | 3,000 | Eqpt. Util. | 1 | 3,000 | — |
| | | | | Tech. Asst. | 2 | 6,000 | |
| | | | | Tech. Subst. | 5 | 15,000 | |

▶ SEM

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|---|----------|----------|------------------|------------------|--------------------|--------|------|
| High Resolution Scanning Analysis Electron Microscope JSM-7001F(JEOL) | PF | Per hour | 1,500 | Eqpt. Util. | 1 | 1,500 | — |
| | | | | Tech. Asst. | 2 | 3,000 | |
| | | | | Tech. Subst. | 10 | 15,000 | |
| High Resolution Scanning Electron Microscope JSM-7000F(JEOL) | PF | Per hour | 1,500 | Eqpt. Util. | 1 | 1,500 | — |
| | | | | Tech. Asst. | 2 | 3,000 | |
| | | | | Tech. Subst. | 10 | 15,000 | |
| Low Vacuum Scanning Electron Microscope JSM-6510LA(JEOL) | PF | Per hour | 1,500 | Eqpt. Util. | 1 | 1,500 | — |
| | | | | Tech. Asst. | 2 | 3,000 | |
| | | | | Tech. Subst. | 10 | 15,000 | |
| Low Damage Scanning Electron Microscope JSM-7500FA(JEOL) | PF | Per hour | 1,500 | Eqpt. Util. | 1 | 1,500 | — |
| | | | | Tech. Asst. | 2 | 3,000 | |
| | | | | Tech. Subst. | 10 | 15,000 | |

▶ FIB-SEM

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|---|----------|----------|------------------|------------------|--------------------|--------------------------------------|---------------------------------------|
| Ion Beam Processing System for TEM Sample JIB-4600F(JEOL) | PF | Per hour | 2,400 | Eqpt. Util. | 1 | 2,400 | — |
| | | | | Tech. Asst. | 2 | 4,800 | |
| | | | | Tech. Subst. | 5 | 12,000 | |
| Hybrid FIB-SEM System linked with CAD navigation system XVision200TB(Hitachi High-Technologies) | PF | Per hour | 4,000 | Eqpt. Util. | 1 | Basic unit price Integration × 1 | Use of Gas gun +2,000 SEM:1,000 |
| | | | | Tech. Asst. | 2 | Basic unit price Integration × 2 | |
| | | | | Tech. Subst. | 10 | Basic unit price Integration × 10 | |

▶ XRD

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|--|----------|----------|------------------|------------------|--------------------|--------|---|
| Ultraprecision 3D Structural Diffractometer SuperLab(Rigaku) | PF | Half day | 12,000 | Eqpt.Util. | 1 | 12,000 | — |
| | | | | Tech.Asst. | 2 | 24,000 | |
| | | | | Tech.Subst. | 5 | 60,000 | |
| Inorganic Fine Crystal Structural Diffractometer VariMax Dual(Rigaku) | PF | Per hour | 2,000 | Eqpt.Util. | 1 | 2,000 | Maximum fee is up to 12hours per day.No charge after the hours. |
| | | | | Tech.Asst. | 2 | 4,000 | |
| | | | | Tech.Subst. | 5 | 10,000 | |
| Organic Polymeric Materials Structural Diffractometer Micro7HFM-AXIS VII(Rigaku) | OE | Per hour | 2,000 | Eqpt.Util. | 1 | 2,000 | Maximum fee is up to 12hours per day.No charge after the hours. |
| | | | | Tech.Asst. | 2 | 4,000 | |
| | | | | Tech.Subst. | 5 | 10,000 | |
| High Luminance In-plane Type X-ray Diffractometer SmartLab 9kW(Rigaku) | PF | Half day | 7,200 | Eqpt.Util. | 1 | 7,200 | — |
| | | | | Tech.Asst. | 2 | 14,400 | |
| | | | | Tech.Subst. | 5 | 36,000 | |
| X-ray Diffractometer for surface structure analysis ATX-G Ultra18 type (Rigaku) | PF | Half day | 7,200 | Eqpt.Util. | 1 | 7,200 | — |
| | | | | Tech.Asst. | 2 | 14,400 | |
| | | | | Tech.Subst. | 5 | 36,000 | |
| Powder X-ray Diffractometer Geigerflex (Rigaku) | OE | Half day | 1,200 | Eqpt.Util. | 1 | 1,200 | — |
| | | | | Tech.Asst. | 2 | 2,400 | |
| | | | | Tech.Subst. | 5 | 6,000 | |
| Powder X-ray Diffractometer SmartLab 3kW (Rigaku) | PF | Half day | 7,200 | Eqpt.Util. | 1 | 7,200 | — |
| | | | | Tech.Asst. | 2 | 14,400 | |
| | | | | Tech.Subst. | 5 | 36,000 | |
| Powder X-ray Diffractometer SmartLab K α 1 (Rigaku) | PF | Half day | 7,200 | Eqpt.Util. | 1 | 7,200 | Cooperation equipment with AIST |
| | | | | Tech.Asst. | 2 | 14,400 | |
| | | | | Tech.Subst. | 5 | 36,000 | |

▶ Optical Property Measurement

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|---|----------|----------|------------------|------------------|--------------------|--------|---|
| CEP Stabilized Femtosecond Regenerative Amplifier Legend Elite USP-HE-CEP/Evo-30 (Coherent) | OE | Per day | 32,000 | Eqpt.Util. | 1 | 32,000 | All optical parts for experiments is basically prepared by the users. |
| | | | | Tech.Asst. | 2 | 64,000 | |
| | | | | Tech.Subst. | Invalid | — | |
| Spectral Ellipsometer M-2000DI-T(J.A.Woollam) | PF | Per day | 5,000 | Eqpt.Util. | 1 | 5,000 | — |
| | | | | Tech.Asst. | 2 | 10,000 | |
| | | | | Tech.Subst. | 10 | 50,000 | |

▶ Electrical and Magnetic Property Measurement

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|---|----------|----------|------------------|------------------|--------------------|--------|--|
| Electromagnetic Physical Property Measurement System under Ultimate Circumstances PPMS-14LHatt (Quantum Design Japan) | PF | Per day | 20,000 | Eqpt.Util. | 1 | 20,000 | ¥20,000 per day will be added if magnetic field larger than 10T is used. |
| | | | | Tech.Asst. | 2 | 40,000 | |
| | | | | Tech.Subst. | 3.5 | 70,000 | |

▶ Electric Characteristics Measurement

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|---|----------|----------|------------------|------------------|--------------------|--------|---|
| Environmental Control Manual Probe Station FCE3/1A or others (TOYO Corporation) | PF | Per hour | 1,500 | Eqpt.Util. | 1 | 1,500 | Maximum fee is up to 12hours per day.No charge after the hours. |
| | | | | Tech.Asst. | 2 | 3,000 | |
| | | | | Tech.Subst. | 5 | 7,500 | |

▶ SIMS

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|---|----------|----------|------------------|------------------|--------------------|---------|---|
| Ultramicro Elements Measurement System(SIMS) NanoSIMS 50L(AMETEK) | PF | Per day | 72,000 | Eqpt.Util. | 1 | 72,000 | For preparation and adjustment characterization fee is ¥10,000. |
| | | | | Tech.Asst. | 2 | 144,000 | |
| | | | | Tech.Subst. | 5 | 360,000 | |

▶ Scanning probe microscope

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|--|----------|------------|--|------------------|--------------------|--------------------------------------|------|
| Scanning Probe Microscope L-tarce II (Hitachi High-Technologies) | PF | Per screen | use of carry-on cantilever :¥1,000 use of common cantilever :¥1,400 | Eqpt.Util. | 1 | Basic unit price Integration × 1 | — |
| | | | | Tech.Asst. | 2 | Basic unit price Integration × 2 | |
| | | | | Tech.Subst. | 10 | Basic unit price Integration × 10 | |

► Specimen Preparation Devices

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|--|----------|----------|------------------|------------------|--------------------|--------|--|
| Cross Section Polisher(CP) SM-090010,090020(JEOL) | PF | Per case | 2,000 | Eqpt.Util. | 1 | 2,000 | — |
| | | | | Tech.Asst. | 2 | 4,000 | |
| | | | | Tech.Subst. | 20 | 40,000 | |
| Precision Ion Polisher (PIPS) Model-691(GATAN) | PF | Per day | 3,000 | Eqpt.Util. | 1 | 3,000 | — |
| | | | | Tech.Asst. | 2 | 6,000 | |
| | | | | Tech.Subst. | 10 | 30,000 | |
| Precision Ion Polisher (PIPS) EMD-12210(JEOL) | PF | Per day | 3,000 | Eqpt.Util. | 1 | 3,000 | — |
| | | | | Tech.Asst. | 2 | 6,000 | |
| | | | | Tech.Subst. | 5 | 15,000 | |
| Ion Slicer (IS) EM-09100IS(JEOL) | PF | Per day | 6,000 | Eqpt.Util. | 1 | 6,000 | — |
| | | | | Tech.Asst. | 2 | 12,000 | |
| | | | | Tech.Subst. | 10 | 60,000 | |
| Cryo-Ion Slicer (Cryo-IS) IB-09060CIS(JEOL) | PF | Per day | 6,000 | Eqpt.Util. | 1 | 6,000 | — |
| | | | | Tech.Asst. | 2 | 12,000 | |
| | | | | Tech.Subst. | 10 | 60,000 | |
| Micron Meister MC-181MY(Maruto) | OE | Per case | 2,000 | Eqpt.Util. | 1 | 2,000 | — |
| | | | | Tech.Asst. | 2 | 4,000 | |
| | | | | Tech.Subst. | 15 | 30,000 | |
| Low Angle Ion Milling System Model1010JT(JEOL) | OE | Per case | 2,000 | Eqpt.Util. | 1 | 2,000 | — |
| | | | | Tech.Asst. | 2 | 4,000 | |
| | | | | Tech.Subst. | 15 | 30,000 | |
| Ultramicrotome EM UC7(Leica) | PF | Per case | 50,000 | Eqpt.Util. | — | — | After preparing the embedded sample, please request for cutting it. |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | 1 | 50,000 | |
| NanoMill MODEL1040 | PF | Per hour | 1,500 | Eqpt.Util. | 1 | 1500 | — |
| | | | | Tech.Asst. | 2 | 3000 | |
| | | | | Tech.Subst. | 5 | 7500 | |
| Vacuum Vapor Deposition Apparatus | OE | - | no charge | Eqpt.Util. | — | — | Materials for evaporating plate should be prepared by the users. |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| Multi Prep Abrasive Equipment EM-ALLIED8(JEOL) | OE | - | no charge | Eqpt.Util. | — | — | The abrasive papers and other necessities should be prepared by the users. |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| Dimple Glinder Model-656(GATAN) | OE | - | no charge | Eqpt.Util. | — | — | The rotator and abrasives should be prepared by the users. |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| Ultra Sonic Disk Cutter Model-601(GATAN) | OE | - | no charge | Eqpt.Util. | — | — | The blades should be prepared by the users. |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| PECS Model-681(GATAN) | OE | - | no charge | Eqpt.Util. | — | — | — |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| Osmium Coater Neoc-ST(MEIWAFOSISI) | OE | - | no charge | Eqpt.Util. | — | — | — |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| Low Speed Cutting Equipment (ISOMET) | OE | - | no charge | Eqpt.Util. | — | — | The blades and abrasives should be prepared by the users. |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| Dia Wrap | OE | - | no charge | Eqpt.Util. | — | — | — |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |
| Handy Wrap | OE | - | no charge | Eqpt.Util. | — | — | The abrasive papers should be prepared by the users. |
| | | | | Tech.Asst. | — | — | |
| | | | | Tech.Subst. | — | — | |

► UPS,XPS,ESR

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|--|----------|----------|------------------|------------------|--------------------|---------|---|
| Photoelectron Spectrometry Surface Electron Structure Measurement System(UPS) R4000 | OE | Per day | 10,000 | Eqpt.Util. | 1 | 10,000 | — |
| | | | | Tech.Asst. | 2 | 20,000 | |
| | | | | Tech.Subst. | Invalid | — | |
| Multifunctional Scanning X-ray Photoelectron Spectrometry (XPS)PHI 5000 VersaProbe(ULVAC-PHI) | PF | Per hour | 3,000 | Eqpt.Util. | 1 | 3,000 | Maximum fee is up to 12hours per day.No charge after the hours. |
| | | | | Tech.Asst. | 2 | 6,000 | |
| | | | | Tech.Subst. | 10 | 30,000 | |
| Electron Spin Resonance System(ESR) JES-FA300(JEOL) | OE | Per day | 15,000 | Eqpt.Util. | 1 | 15,000 | ¥6,000 will be added to the unit price if Helium is used. |
| | | | | Tech.Asst. | 2 | 30,000 | |
| | | | | Tech.Subst. | 10 | 150,000 | |

► Room for users

| Equipment | Category | Per rate | Basic unit price | Utilization form | Coefficient number | Amount | Note |
|----------------------|----------|----------|------------------|------------------|--------------------|--------|--|
| Room for researchers | OE | Per day | 1,000 | - | - | 1,000 | Room No. 131, 132, Bldg. No. 9, Faculty of Engineering |