IIT PALAKKAD

Approved analytical charges for Internal Users
Central Instrumentation Facility (CIF) and
Central Micro-Nano Fabrication Facility (CMFF)

INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD
भारतीय प्रौद्योगिकी संस्थान पालक्काड

Under Ministry of Education, Govt. of India
शिक्षा मंत्रालय के अधीन, भारत सरकार

Sl. No.	Instrument Name	Analysis	Unit	Sponsored Research/Students Category (Internal)	Industry Consultancy (Internal)
1	64-channel EEG amplifier		Per Hour	510	2040
2	Experiment with VNA/ Signal Analyzer/ Microwave Signal Generator		1 Hour	55	220
			1 day (9.00hrs to 13.00hrs) and (14.00hrs to 17.00hrs)	220	880
3	Fourier Transform Infra Red Spectroscopy	With KBR Pellet	If KBr pellet has to be made by CIF staff	145	580
			If KBr Pellet is brought by the user	95	380
		For ATR Analysis		95	380
4	Liquid Chromatogram Mass Spectrophotometer (Method is based on water, acetonitrile mixture. The cost indicated is for a 15 min run. Actual cost may vary depending on the method.)	LC MS analysis	If the method is for 15 minute run	145	580
		LC MS MS Analysis. If Sample is not submitted in prescribed vials an additional cost of 85 /- will be added	If the method is for 15 minute run	165	660
5	Nuclear Magnetic Resonace Spectrophotometer	If Sample preparation is to be done by CIF. Cost per sample in respective solvents. (If the sample is not submitted in NMR tube,the same can be purchased from CIF with the cost of INR 1000/ tube.)	CDCl3	115	460
			CD3OD	215	860
			Deuterated DMSO	315	1260
			D2O	415	1660
		Sample is prepared by the user in NMR tube	per sample	65	260
6	TG DTA MS	Program for a routine run from RT to 1100 deg C at 10 deg./min. *Cost may change according to the Temperature programme and gases.	For Alumina Pan	423	1692
			For Pt/Rh Pan	1367	5468
	TG DTA	Program for a routine run from RT to 1100 deg C at 10 deg./min. *Cost may change according to the Temperature programme and gases.	For Alumina Pan	330	1320
			For Pt/Rh Pan	1274	5096
7	DC Probe Station and Semiconductor Parameter Analyser	DC Probe Station (RT to 150 deg C) with Semiconductor Parameter Analyser	per hour	60	240
		Semiconductor Parameter Analyser	per hour	35	140
8	Mask Aligner	Mask will be brought by the User. Prices comparable or lesser than what IISc charges. Prices are high due to consumables (resists, gases). Available resists for common use will be put up. Any resists not mentioned in the list will have to be brought by the User. It will be encouraged to club slots because it would not be advisable to switch on/off the lamp multiple times a day.	per hour	800	3200
9	FE S E M	SEM Image	per hour	160	640
		SEM + EDS	per hour	185	740
		SEM + EDS mapping	per hour	210	840
		SEM Image + EBSD + Mapping	per Specimen	310	1240
		Au/Pd coating	per Specimen	210	840
		SEM + Lithography	per use	860	3440
10	Universal hardness tester		per specimen with max. of 10 indents	60	240
11	Non contact Optical Profilometer		per hour	110	440
	Electropolishing		per specimen	50	200
12	XRD	Powder/thin film	Per Sample	110	440
		XRR	Per Sample	160	640
		SAXS	Per Sample	160	640
		High Temperature/Stress /Pole figure	Per Sample	160	640
13	Raman Spectroscopy	Normal Scan – 514 nm, 633 nm	Per Sample	50	200
		UV laser – 325 nm	Per Sample	50	200
		Temperature Dependence from 80K to 800K / Insitu 4 probe measurement	1. Upto 15 Spectra (Liquid Nitrogen to be arranged by user)	200	800
			2. Upto 25 Spectra (Liquid Nitrogen to be arranged by user)	250	1000
			3. Upto 35 Spectra Liquid Nitrogen to be arranged by user)	300	1200
			4. Per sample (Liquid Nitrogen arranged by CIF for first 10L and Rs.120/ L charged for additional LN2 used).	1500	6000

14	High Performance Liquid Chromatoraphy	Method is based on water, acetonitrile mixture. The cost indicated is for a 15 min run. Actual cost may vary depending on the method. If Sample is not Submitted in Prescribed Vials an Additional cost of 85 /- will be added, If sample collecting Vials also has to provide by CIF additional cost of 50/- per samples needs to collect, will be added.	Per Sample	160	640
15	RF Sputtering system	(Tentative cost, will be revised after equipment if fully commissioned.) Standard targets will be supplied. Gold and Platinum deposition will incur an additional cost, depending on actual duration of deposition.	per 3 h	350	1400
16	Wet bench for cleaning and Lithography	Cost Includes Wet Bench and cost of DI water Plant	30 min	55	220
		DI Water alone	Type 1 Water (Ultra Pure)/Liter	15	60
			Type 2 Water/Liter	10	40
17	Mixed signal Digital Oscilloscope		per hr.	25	100
18	RF Probe station	one probe	per session	55	220
		two probes	per session	75	300
		three probes	per session	95	380
		four probes	per session	115	460
19	Chemisorption	Gases used are Ar and 10 % Hydrogen in Ar (* Cost may vary according to the gases used and method)	per sample	670	2680
20	GC	For organic compounds with boiling point below 150 oC. Compounds should not decompose upto 150 oC.	per sample for Single Column Operation	260	1040
21	Confocal Laser Scanning Microscope		Per Slot (2 Hours)	300	1200
22	Automatic PCB Manufacturing Machine with PTH Facility	Fabrication on the printed circuit board (PCB) with etching and milling. (The user should bring the PCB substrate for fabrication)	1 Hour	150	600
			2 Hour	250	1000
			3 Hour	400	1600
			More than 3 Hour	600	2400
23	Arc Melt Furnace		For Four hours of operatrion	150	600
24	Ball Mill	Grinding jar of 50 ml and Milling balls shall be brought by the user.	For max of Two hours of operatrion	60	240
25	Muffle Furnace	Suitable Boats or Crucible shall be brought by the user.	For Four hours of operatrion	30	120
26	Rapid Thermal Processing System	The boats and tube shall be brought by the user.	For Four hours of operatrion	90	360
27	Quartz tube Sealing Station		1 No	50	200
			2 Nos	80	320
		Quartz tube	1 No. (Arranged by CIF) 18 mm OD, 15 mm ID	500	2000
		Diffusion Pump Vaccum (10-5 mbar)	Per Slot (Liquid Nitrogen arranged by CIF)	1600	6400
28	High Temperature Chamber Furnace 1700°C		Per Sample	60	240
29	High Resolution Optical Microscope		Per Slot of 1 Hour	50	200
30	Time-Resolved Spectrofluorometer		Per Decay	120	480
			Quenching Study (For 10 Samples)	1200	4800
			FRET (Per Decay)	120	480
			Anisotropy (Per Decay)	120	480
			TRES (Per Decay)	120	480
31	Dual Channel Source Meter		For Full Day	50	200
32	Dynamic Shear Rheometer		Frequency/Time/Temperature sweep	300	1200
			MSCR	300	1200
			LAS	300	1200
			Building Material Cell	400	1600
			DMA Analysis (Tension/Torsion)	450	1800
			Flow of consolidated powders	600	2400
			Tribology	600	2400