

# TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Annual Procurement Plan for Financial Year 2022-2023

Sl. No	Item Description	Unit	Quantity
1	Peta Byte RAID storage	No	2
2	Computer servers & HPC	No	1
3	Communication /network hardware	Set	1
4	G-APD camera	No	1
5	Position sensitive detectors	No	2
6	Electronics and vacuum pump accessories	Set	2
7	Power supplies and pulse generators	Set	1
8	Upgrade of COLTRIMS	Set	1
9	X-ray & electron detectors, crystals, gratings etc.	Set	1
10	Large volume LaBr3:CE detectors	No	2
11	Upgrade of lasers for ultra high contrast	Set	1
12	Additional pump lasers to upgrade 100 TW laser to 200 TW laser	Set	1
13	Detectors, imaging systems for experiments with ultra-high contrast pulses	Set	3
14	BGO	No	2
15	Low temperature measurement accessories	Set	1
16	Low beta Nb cavity accessories, high purity Nb, Cu etc.	Set	1
17	Beam transport system components (magnets, power supplies, beam diagnostic devices, control devices, etc.)	Set	2
18	Vacuum system components	Set	2
19	Cryogenic system components	Set	2
20	Position sensitive scintillator detectors	No	2
21	Computers and accessories for DNAP	Nos	1

Sl. No	Item Description	Unit	Quantity
22	Science grade HIRG detector array, H2RG mux, astronomy filters, array controller, collectors – hermetic, hermetic connector fanout, connectors – non hermetic, cryogenic ribbon, detector cryo flex cable, cold feedthrough connectors, warm array cables, detector cryo connection/filter board, extra video board for software test station, PCI express boards, test station	Set	1
23	Cryogenic environmental vacuum chamber, cryo-cooler stations, closed cycle cooler lines, closed cycle cooler head, compressor	Set	1
24	Confocal Microscope	Set	2
25	Central Data Storage Capacity	Set	1
26	FPLC System	Set	1
27	Lattice Light Sheet Microscope/ AFM/ Femto-Second Laser/ Fluoresce microscope	Set	1
28	Up-gradation and replacement of old instruments	Set	1
29	Multimodal Animal imaging	Set	1
30	NGS Machine	Set	1
31	Peta Watt Laser	No	1
32	TIRM/STORM, STED, PALM	No	1
33	Optical Tweezers setups	No	1
34	Computers and Peripherals, Networking	No	10
35	Workshop Machinery	No	1
36	Fumehoods	No	7
37	Spin coating unit	No	1
38	Dipping robots	No	1
39	UV-ozone cleaner, Si/Au-coated Si/glass/ITO-coated glass wafers	No	1
40	Peristaltic pump	No	3
41	Fluorescence and phosphorescence (steady state and time resolved)	No	1
42	QCM component equipped with flow cell units, sensors and software	No	2
43	Off site Storage for DR	Lot	1

<b>Sl. No</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>
44	Desktops	No	25
45	Laptops	No	25
46	Printers	No	6
47	Computer Software and Data	Set	1
48	Molecular biology reagents	Set	1
49	Tissue culture consumables	Set	1
50	Protein Biochemistry reagents	Set	1
51	Reagents for Cell Biology	Set	1
52	Laboratory chemicals	Set	1
53	Consumables/re-agents	Set	1
54	Animal feed and culture material for insect work	Set	1
55	Plastic and glass ware for laboratory work	Set	1
56	AMC of High Value Equipment/ Facility Equipment	Set	1
57	Laboratory Safety equipment	Set	1
58	CO <sub>2</sub> , N <sub>2</sub> and other Gases, Liquid Nitrogen Dry Ice & Alcohol, Liquid helium	Set	1
59	Equipment Spares	Set	1
60	Facility Consumables	Set	1
61	Scientific Information Resources and Data link Charges	Set	1
62	Open access publication costs	Set	1
63	Fine chemicals	Set	1
64	Biochemicals	Set	1
65	Labeled chemicals	Set	1
66	Chemicals for synthesis of materials and other compounds	Set	1
67	Chemicals & Biochemicals for molecular biology experiments	Set	1
68	Enzymes, peptides and nucleotides	Set	1
69	Vacuum equipment & chambers, Power supplies, Meters, Spares and accessories for existing equipments, Sputtering targets, High purity chemicals and gases	Set	1
70	E-Books, Journals and software	Set	1

<b>Sl. No</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>
71	Vacuum accessories, compressor oils, adsorbing materials, filters, computer peripherals	Set	1
72	AMC charges for Power Plant, Chilling Plant, Computing Systems, Software renewal, etc.	Set	1
73	Electrical, STP and HVAC system Upgrade	Lot	1
74	Computer and video conferencing and accessories	Set	1
75	Centralised computing facility (HPC)	No.	1
76	Milli-Q/Milli-RO systems, Deep freezers, speed-vac systems	No.	1
77	Plate readers/spectro photo meters, ultra/centrifuges, Gel doc system, Typhoon, cryostat, microtome, X-ray developer etc.	No.	1
78	Lasers, computers, sequencing systems and accessories for Biology	No.	2
79	Microscopes and imaging systems for biology spares	No.	1
80	Transmission Electron Microscope (TEM)	No.	1
81	Ion mobility mass spectrometer	No.	1
82	Spares/upkeep of biochemistry and synthetic chemistry facility	No.	2
83	AFM spares (lasers, cantilevers, electronics, maintenance)	No.	1
84	Scanning electrochemical microscope	No.	1
85	Lasers, computers and accessories for chemistry	No.	2
86	Magnetometers: maintenance, spares and accessories	No.	2
87	X-ray diffractometers: maintenance, spares and accessories	No.	2
88	Transmission Electron Microscope: maintenance, spares and accessories	No.	2
89	In-situ four probe micro-manipulator assembly for SEM	No.	1
90	Nanofabrication facility: maintenance, spares, accessories	No.	2
91	Upgrade and maintenance of electron detection system in ARPES systems	No.	2

<b>Sl. No</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>
92	Maintenance of SRPES and HREELs spectrometers	No.	2
93	Maintenance and upgrade of crystal growth facility, furnaces, X-ray diffractometers, vacuum pumps, etc.	No.	2
94	Augmentation of dilution refrigerator insert for the PPMS	No.	1
95	Fabrication of pulsed laser deposition chamber with high pressure RHEED	No.	1
96	He3 dilution insert for existing cryomagnet	No.	1
97	Low mechanical noise closed cycle cryostat	No.	1
98	Dry dilution fridge with magnetic field up to 1.2T	No.	1
99	Operation and maintenance of semiconductor growth system	No.	2
100	Upgrade of new spectroscopic setup	No.	1
101	Low temperature chamber for NSOM	No.	1
102	generator Multi-channel arbitrary waveform	No.	1
103	Computers and accessories	Set	2
104	Maintenance and upgrade of low temperature facility and accessories	No.	2
105	Communication /network hardware	Set	2
106	Deployment of seamless wireless network	No.	1
107	Computer servers	No.	1
108	Audio & Video Equipment for lecture theatres	No.	2
109	Equipment for refurbishment of Laboratories and Offices in over 5 decades old, lab and office blocks	No.	2
110	Replacement of old AHUs and FCUs, and new piping at various locations	No.	1
111	Workshop Machinery and Equipment	No.	1
112	Replacement of old transformers and switchgear in sub-station, including associated cabling, etc.	No.	2
113	Fire Fighting Equipment,	No.	1

<b>Sl. No</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>
114	Surveillance and security Equipment	No.	1
115	Miscellaneous hardware	No.	1
116	HAGAR O&M	Lot	2
117	Spares and supplies for high energy physics	Lot	2
118	Maintenance and spares for lasers, gases and chemicals	Lot	2
119	Maintenance and upgrade of ECR facility	Lot	1
120	Electronic modules, spares, materials, gases, etc.	Set	2
121	Spares and consumables for optics and lasers	Set	2
122	Electronics modules, beam line components, target materials	Set	1
123	Optics, electronics and vacuum spares	Set	2
124	Detector spares, target, shipment	Set	2
125	Tin enrichment feasibility study	Set	2
126	Special shielding materials, He3 gas, high purity tin, sensors, etc.	Set	2
127	Electronics, detectors, target materials etc.	Set	2
128	Helium gas	Cubic Meter	10000
129	Liquid nitrogen	Liter	200000
130	Spares for Pelletron-LINAC	Set	2
131	Maintenance of computer cluster	Set	1
132	Windows with coatings, discharge lamps, continuum lamps, ethernet switch with fiber input, motor power supply, computers, software, mechanical & thermal components, optical elements	Set	2
133	Optical, mechanical and electronic components and spares	Set	2
134	Miscellaneous spares for balloon facility	Set	2
135	Maintenance of high performance computing facility	Set	2

<b>Sl. No</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>
136	Upkeep of equipment and auxiliary services	Set	1
137	Reagents and consumables for Biology	Set	2
138	Chemicals, enzymes and small equipments for Chemistry	Set	2
139	Miscellaneous items for spectroscopies	Set	2
140	High purity metals	Set	2
141	Spares for PPMS, NMR set-up	Set	2
142	Furnaces and accessories	Set	2
143	High purity oxides, chemicals for single crystal growth facility, crucibles, squid sensors and control units, etc.	Set	2
144	Targets, substrates, photoresist and high purity chemicals, spares and miscellaneous components	Set	2
145	Miscellaneous lab equipment, spares, accessories, chemicals, substrates	Set	2
146	Laser and optics spares and accessories	Set	2
147	Signal generator and other electronics accessories	Set	2
148	RF generators, microwave instruments and accessories	Set	2
149	Civil Works (Repairs, maintenance & upgrades)	Set	2
150	Civil Works (Refurbishment and upkeep of Hostels and Guest House)	Set	1
151	Electrical Equipment's, substation, DG set	Set	1