

**CENTRE OF EXCELLENCE IN SOLID STATE PHYSICS,
University of the Punjab, QAC, Lahore, Pakistan**

**Pre-Qualification Notice of Firms for the Provision of
Materials / Chemicals**

Companies / representatives having interest in provision of the following and other such chemicals / materials / substrates need to register with the Centre of Excellence in Solid State Physics. The last date for submitting such registration proposals is April 26, 2022, during office hours. The companies need to provide certificate of dealership from authentic manufacturers of such chemicals. The list of companies selected, based on pre-qualification, for provision of such chemicals will be approved by the committee constituted for such purpose.

Sr. No	Name of the Material / chemical
1.	Silver Nitrate (AgNO_3)
2.	Hexadecyltrimethoxysilane (HDTMS)
3.	triethanolamine (TEA)
4.	1-dodecanethiol
5.	Sodium borohydride (NaBH_4)
6.	Poly dimethoxy silane
7.	Perfluorooctylated quaternary ammonium silane (PFSC)
8.	fluoroalkylsilane 1H,1H,2H,2H-Perfluorodecyltrie
9.	Trimethoxy silane
10.	Octadecyl trichlorosilane ($\text{CH}_3(\text{CH}_2)_{17}\text{SiCl}_3$)
11.	1H,1H,2H,2H-perfluorodecyltrichlorosilane ($\text{C}_{10}\text{H}_4\text{Cl}_3\text{F}_{17}\text{Si}$)
12.	1H,1H,2H,2H-Perfluorooctyltriethoxysilane ($\text{C}_{14}\text{H}_{19}\text{F}_{13}\text{O}_3\text{Si}$)
13.	Hydrogen tetrachloroaurate (HAuCl_4)
14.	Ferrous sulfate heptahydrate ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$)

15.	Iron(III) Chloride Hexahydrate ($\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$)
16.	Titanium (IV) oxysulfate ($\text{TiOSO}_4 \cdot x\text{H}_2\text{O}$)
17.	Titanium isopropoxide ($\text{C}_{12}\text{H}_{28}\text{O}_4\text{Ti}$)
18.	titanium tetrachloride (TiCl_4)
19.	Zinc nitrate hexahydrate ($\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$)
20.	Zinc sulfate (ZnSO_4)
21.	Zn acetate dehydrate ($\text{Zn}(\text{CH}_3\text{CO}_2)_2 \cdot 2\text{H}_2\text{O}$)
22.	Zinc acetate ($\text{ZnC}_4\text{H}_6\text{O}_4$)
23.	zinc carbonate (ZnCO_3)
24.	acetic acid (CH_3COOH)
25.	Sodium acetate ($\text{C}_2\text{H}_3\text{NaO}_2$)
26.	poly(vinylpyrrolidone) (PVP, MW: 40,000)
27.	Chitosan
28.	Sodium chloride (NaCl)
29.	potassium permanganate (KMnO_4)
30.	saffron methyl orange (MO) powder
31.	Sodium hydroxide (NaOH)
32.	Nitric acid (HNO_3)
33.	Laccase enzyme oxidizes Gallic acid (GA)
34.	(3-Mercaptopropyl)trimethoxysilane ($\text{C}_6\text{H}_{16}\text{O}_3\text{SSi}$)
35.	(3-Aminopropyl)triethoxysilane ($\text{C}_9\text{H}_{23}\text{NO}_3\text{Si}$)
36.	Hydroxylamine (NH_2OH)
37.	Sulfuric Acid (H_2SO_4)
38.	Hydrogen peroxide (H_2O_2)
39.	diethylene glycol
40.	Ethanol
41.	Methanol
42.	Isopropanol
43.	Acetone
44.	silicon/silicon oxide wafers with native oxide layer

45.	Tweezers Teflon
46.	Silver paste
47.	Lanthanum nitrate
48.	Cobalt nitrate
49.	Bismuth nitrate
50.	Iron nitrate
51.	Samarium nitrate hexahydrate
52.	Cerium nitrate hexahydrate
53.	Neodymium(III) nitrate hexahydrate
54.	Zirconium oxychloride octahydrate
55.	Ammonium niobate oxalate hydrate
56.	Ethylene glycol
57.	Europium oxide
58.	Titanium (IV) bromide 98%
59.	Vanadium penta-oxide (V_2O_5)
60.	Molybdenum chloride (powder)
61.	Lithium carbonate
62.	Ammonium hydroxide (NH_4OH)
63.	Carbon nanotube, multi-walled, carboxylic acid functionalized
64.	Graphene (powder)
65.	Aniline reagent 99% ($C_6H_5NH_2$)
66.	Tin Acetate $Sn(CH_3CO_2)_4$
67.	Antimony acetate $(CH_3CO_2)_3Sb$
68.	Pyrrole reagent grade
69.	Bismuth Nitrate $Bi(NO_3)_3 \cdot 5H_2O$
70.	Cobalt nitrate hexahydrate (reagent grade)
71.	Titanium Carbonitride
72.	Hydrazine
73.	Ammonium persulfate (ACS Reagent, Assay $\geq 98\%$)
74.	1,2,3,4-Tetrahydronaphthalene anhydrous (Assay 99%;With sure/seal)

75.	Poly(methyl methacrylate) (average Mw ~355,000)
76.	Polystyrene (average Mw 280,000)
77.	Poly(vinyl alcohol) (average Mw ~90,000)
78.	Trichlorododecylsilane (DTS) (assay $\geq$ 95%, density 1.02g/ml)
79.	Trichloro(octadecyl)silane (OTS) (assay $\geq$ 90%, density 1g/ml)
80.	Hexamethyldisilazane (HMDS) (20% solution in xylene)
81.	PTB7 (average Mw 80,000-200,000, PDI $\leq$ 3.0)
82.	Polyethylenimine (PEI) (average Mw ~5,000, PDI $\leq$ 1.3 linear, n-type modifier)
83.	Poly (3-hexylthiophene-2,5-diyl) (P3HT); regioregular (RR >90%, average Mw ~50,000-100,000)
84.	C8-BTBT (Assay $\geq$ 99%; p-type Mobility $\geq$ 5cm ² /V.s)
85.	Poly (benzimidazobenzophenanthroline) (N-type Mobility~0.1cm ² /V.s, p-type Mobility~0.4cm ² /V.s)
86.	Benz[b] anthracene (Assay 98%, p-type mobility $\geq$ 0.3cm ² /V.s.)
87.	Zinc Oxide nanowires (Length > 200nm)
88.	Copper(II) acetate hydrate (assay >98%)
89.	Tungsten(IV) chloride (assay >95%)
90.	Poly(9,9-di-n-octylfluorenyl-2,7-diyl)
91.	Multi-Walled Carbon Nanotube Powder (Diameter: 50-100 nm, Length: 5-15 μ m)
92.	Poly(2,3-dihydrothieno-1,4-dioxin)-poly(styrenesulfonate), (C ₆ H ₄ O ₂ S) _n
93.	poly- (perfluorobutenylvinylether), (C ₂ H ₅) ₃ P
94.	Poly{[N,N'-bis(2-octyldodecyl)-naphthalene-1,4,5,8-bis(dicarboximide)-2,6-diyl]-alt-5,5'-(2,2'-bithiophene)}, (C ₆₂ H ₈₈ O ₄ S ₂) _n
95.	poly[3- (potassium-7-hexanoate)-thiophene-2,5-diyl], (P3PHT)
96.	Tin Oxide
97.	Indium tin oxide
98.	Tungsten Oxide
99.	Cuprous Oxide
100.	Gallium
101.	Selenium

102.	Indium
103.	Tn
104.	Silicon wafers (un-doped and doped)
105.	Copper foils
106.	Aluminum foils
107.	Silver foils
108.	Sapphire substrates
109.	SOI
110.	Glass slides

Director
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