

**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**

**CORRIGENDUM**

Companies / representatives having interest in provision of the following and other such chemicals / materials / substrates should need to register with the Centre of Excellence in Solid State Physics. 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.

Bids only through E-Pak Acquisition and disposal system (EPADS) will be entertained. No bid other than EPADS will be accepted. Bid security will be submitted before closing of tender physically in the Director's office, Quaid-e-Azam Campus, Lahore, (Tel: 042-99233133). Bidder will also upload the complete scanned copy of their bid in EPADS.

Bidding documents, containing detailed terms and conditions can be downloaded from the websites of PPRA or Punjab University ([www.pu.edu.pk](http://www.pu.edu.pk)). In case of any query, guidance can be sought from the director's office.

The bids prepared in accordance with the instructions contained in the bidding documents must be submitted on EPADS by 17-02-2025 till 11:00 (a.m.), which will be opened on the same date at 11:30 (a.m.). If there is a public holiday announced by the Government on the tender opening date, then the tender will be opened on the next working day.

<b>Sr. No</b>	<b>Name of the Material / chemical</b>
1.	Silver Nitrate (AgNO <sub>3</sub> )
2.	Hexadecyltrimethoxysilane (HDTMS)
3.	triethanolamine (TEA)
4.	1-dodecanethiol

5.	Sodium borohydride (NaBH <sub>4</sub> )
6.	Poly dimethoxy silane
7.	Perfluorooctylated quaternary ammonium silane ( PFSC)
8.	fluoroalkylsilane   1H,1H,2H,2H-Perfluorodecyltrie
9.	Trimethoxy silane
10.	Octadecyl trichlorosilane ( CH <sub>3</sub> (CH <sub>2</sub> ) <sub>17</sub> SiCl <sub>3</sub> )
11.	1H,1H,2H,2H-perfluorodecyltrichlorosilane (C <sub>10</sub> H <sub>4</sub> Cl <sub>3</sub> F <sub>17</sub> Si)
12.	1H,1H,2H,2H-Perfluorooctyltriethoxysilane (C <sub>14</sub> H <sub>19</sub> F <sub>13</sub> O <sub>3</sub> Si)
13.	Hydrogen tetrachloroaurate (HAuCl <sub>4</sub> )
14.	Ferrous sulfate heptahydrate ( FeSO <sub>4</sub> .7H <sub>2</sub> O)
15.	Iron(III) Chloride Hexahydrate (FeCl <sub>3</sub> 6H <sub>2</sub> O)
16.	Titanium (IV) oxysulfate (TiOSO <sub>4</sub> .xH <sub>2</sub> O)
17.	Titanium isopropoxide (C <sub>12</sub> H <sub>28</sub> O <sub>4</sub> Ti)
18.	titanium tetrachloride ( TiCl <sub>4</sub> )
19.	Zinc nitrate hexahydrate Zn (NO <sub>3</sub> ) <sub>2</sub> ·6H <sub>2</sub> O
20.	Zinc sulfate (ZnSO <sub>4</sub> )
21.	Zn acetate dehydrate (Zn(CH <sub>3</sub> CO <sub>2</sub> ) <sub>2</sub> ·2H <sub>2</sub> O))
22.	Zinc acetate ( ZnC <sub>4</sub> H <sub>6</sub> O <sub>4</sub> )
23.	zinc carbonate (ZnCO <sub>3</sub> )
24.	acetic acid (CH <sub>3</sub> COOH)
25.	Sodium acetate (C <sub>2</sub> H <sub>3</sub> NaO <sub>2</sub> )
26.	poly(vinylpyrrolidone) (PVP, MW: 40,000)
27.	Chitosan
28.	Sodium chloride (NaCl)
29.	potassium permanganate (KMnO <sub>4</sub> )
30.	saffron methyl orange (MO) powder
31.	Sodium hydroxide (NaOH)
32.	Nitric acid ( HNO <sub>3</sub> )
33.	Laccase enzyme oxidizes Gallic acid (GA)
34.	(3-Mercaptopropyl)trimethoxysilane (C <sub>6</sub> H <sub>16</sub> O <sub>3</sub> SSi)

35.	(3-Aminopropyl)triethoxysilane (C <sub>9</sub> H <sub>23</sub> NO <sub>3</sub> Si)
36.	Hydroxylamine (NH <sub>2</sub> OH)
37.	Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )
38.	Hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> )
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 <sub>2</sub> O <sub>5</sub> )
60.	Molybdenum chloride (powder)
61.	Lithium carbonate
62.	Ammonium hydroxide (NH <sub>4</sub> OH)
63.	Carbon nanotube, multi-walled, carboxylic acid functionalized
64.	Graphene (powder)

65.	Aniline reagent 99% (C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub> )
66.	Tin Acetate Sn(CH <sub>3</sub> CO <sub>2</sub> ) <sub>4</sub>
67.	Antimony acetate (CH <sub>3</sub> CO <sub>2</sub> ) <sub>3</sub> Sb
68.	Pyrrole reagent grade
69.	Bismuth Nitrate Bi(NO <sub>3</sub> ) <sub>3</sub> .5H <sub>2</sub> O
70.	Cobalt nitrate hexahydrate (reagent grade)
71.	Titanium Carbonitride
72.	Hydrazine
73.	Ammonium persulfate (ACS Reagent, Assay ≥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≥95%, density 1.02g/ml)
79.	Trichloro(octadecyl)silane (OTS) (assay≥90%, density 1g/ml)
80.	Hexamethyldisilazane (HMDS) (20% solution in xylene)
81.	PTB7 (average Mw 80,000-200,000, PDI ≤3.0)
82.	Polyethylenimine (PEI) (average Mw ~5,000, PDI ≤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 ≥99%; p-type Mobility≥5cm <sup>2</sup> /V.s)
85.	Poly (benzimidazobenzophenanthroline) (N-type Mobility~0.1cm <sup>2</sup> /V.s, p-type Mobility~0.4cm <sup>2</sup> /V.s)
86.	Benz[b] anthracene (Assay 98%, p-type mobility≥0.3cm <sup>2</sup> /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 μm)
92.	Poly(2,3-dihydrothieno-1,4-dioxin)-poly(styrenesulfonate), (C <sub>6</sub> H <sub>4</sub> O <sub>2</sub> S) <sub>n</sub>

93.	poly- (perfluorobutenylvinylether), (C <sub>2</sub> H <sub>5</sub> ) <sub>3</sub> 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 <sub>62</sub> H <sub>88</sub> O <sub>4</sub> S <sub>2</sub> ) <sub>n</sub>
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

*S. Sawarneya*

**Director**  
**Centre of Excellence in Solid State Physics**  
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