

**Department of Optoelectronics, University of Kerala, Kariavattom,  
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OPTO/P-CHE-01/2023-24

**Quotation Notice**

Quotations are invited for the following chemicals in the Department of Optoelectronics,  
University of Kerala, Kariavattom, Thiruvananthapuram

Sl No	Chemicals	Formula	Pack	Purity	Quantity	Preferred make
1.	Lanthanum (III) nitrate hexahydrate	La (NO <sub>3</sub> ) <sub>3</sub> .6H <sub>2</sub> O	1	99.90 %	100 g	Thermo Fisher Scientific
2.	Iron (III) nitrate nonahydrate	Fe (NO <sub>3</sub> ) <sub>3</sub> .9H <sub>2</sub> O	1	98+%	100 g	Thermo Fisher Scientific
3.	Titanium (iv) n-butoxide (liquid)	Ti[O(CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub> ] <sub>4</sub> ,	1	99 +%	500 g	Alfa-Aesar
4.	Syringr Filters PTFE, Filtration rating: 0.45 um, Diameter : 13 mm				100 nos	
5.	<u>Cobalt(II) nitrate hexahydrate</u>	Co(NO <sub>3</sub> ) <sub>2</sub> · 6 H <sub>2</sub> O	1	≥ 99%	5g	Sigma Aldrich
6.	N, N, dimethyl formamide , anhydrous (DMF) solvent	HCON(CH <sub>3</sub> ) <sub>2</sub>	1	99.8%	1L	Sigma Aldrich
7.	Gold(III)chloride trihydrate ≥ 99.9%	HAuCl <sub>4</sub> .3H <sub>2</sub> O	3	≥ 99.9%	1 g	Sigma Aldrich
8.	Potassium Iodide	KI	1	≥ 99.9%	5 g	Sigma Aldrich
9.	Ethylene Glycol	HOCH <sub>2</sub> CH <sub>2</sub> OH	3		500 ml	Sigma Aldrich
10.	L-ascorbic acid	C <sub>6</sub> H <sub>8</sub> O <sub>6</sub>	1	99%	25 g	Sigma Aldrich
11.	Hydroxyl amine 50% solution in water		1		100 ml	Sigma Aldrich
12.	Silicon wafer (single side polished), <100>, N-type, contains phosphorus as dopant, diam. × thickness 3 in. × 0.5 mm		1			Sigma Aldrich

13.	Ethanol	C <sub>2</sub> H <sub>6</sub> O	4		500 ml	Himedia
14.	Methanol		1		500 ml	
15.	CTAB		1		100 gm	
16.	Iron (II) chloride tetrahydrate	FeCl <sub>2</sub> .4H <sub>2</sub> O	1		5 g	Sigma Aldrich
17.	Nitric Acid		6	69%	500 ml	Merck
18.	Europium (III) Oxide		1	99.9%	5 gm	Thermofisher scientific
19.	Tungsten (VI) Oxide		1	99.9%	100 gm	Sigma
20.	Strontium Carbonate		1	99.9%	100 gm	Sigma
21.	Acetone		1		5 L	Emparta ACS
22.	Methylene Blue		1	≥ 99%	50 mg	Merck
23.	Malachite Green		1	≥ 99%	50 mg	Merck
24.	Rhodamine B		1	≥ 99%	50 mg	Merck
25.	Methyl Orange		1	≥ 99%	50 mg	Merck
26.	Hafnium IV Chloride	HfCl <sub>4</sub>	3	98%	10 gm	Sigma
27.	Calcium Chloride	CaCl <sub>2</sub>	1	98%		Sigma
28.	Hafnium IV Chloride		2	99%	25 gm	Thermofisher scientific
29.	Magnesium carbonate		1		500 gm	Himedia
30.	Zirconium IV Oxide		1	99%	100 gm	Thermofisher scientific
31.	Sodium Carbonate		1	99.95 %	500 gm	Thermofisher scientific
32.	Europium (III) Oxide		1	99.9%	25 gm	Thermofisher scientific
33.	Erbium III Oxide		1	99.9%	25 gm	Thermofisher scientific
34.	Iron chloride hexahydrate		1	99%	500 g	Sigma/Merck
35.	Strontium chloride hexahydrate		1	99.5%	500 g	Sigma/Merck
36.	Ferric nitrate nonahydrate		1	98%	500g	Sigma/Merck
37.	Cupric nitrate trihydrate		1	95%	250 g	Sigma/Merck
38.	Dysprosium nitrate hexahydrate		1	99%	500 g	Sigma/Merck
39.	Nickel foil		1	99.9%	250 g	Sigma/Merck
40.	Sodium sulfide hydrate		1	60%	500 g	Sigma/Merck
41.	Nickel chloride hexahydrate		1	99%	100g	Sigma/Merck
42.	Titanium isopropoxide		1	99.5%	100 ml	Sigma/Merck
43.	Zinc nitrate hexahydrate	Zn(NO <sub>3</sub> ) <sub>2</sub> .6H <sub>2</sub> O	1	99%	500 gm	Sigma Aldrich
44.	2-Methylimidazole	C <sub>4</sub> H <sub>6</sub> N <sub>2</sub>	1	99%	100 gm	Sigma Aldrich

45.	Silver Nitrate	AgNO <sub>3</sub>	1	≥99%	25 gm	Sigma Aldrich
46.	Zirconyl IV Nitrate hydrate	ZrO(NO <sub>3</sub> ) <sub>2</sub> .xH <sub>2</sub> O	1	99.5%	100 gm	Thermofisher scientific/Merck
47.	PEDOT:PSS (high conductivity grade)		1		10 gm	Sigma/Merck
48.	Silicon Wafer with interdigitated electrodes or PET or glass substrate with interdigitated electrodes	Electrode gap ≤ 1μm	5 Nos.			
49.	Magnetic Stirrer Bead ( 8x 50 mm)		5 Nos.			
50.	Centrifuge tube 30 ml round bottom		8 Nos.			
51.	Microscopic glass slide		1			
52.	Forceps, length 100 mm		2 Nos.			
53.	Wash bottle 500 ml Plastic		3 Nos.			
54.	Whatmann Fiter paper 11 cm dia		1			
55.	Microippette tips		1 pack			
56.	Alumina Crucible Cylindrical	Height- 2.5 inches Diameter- 2 inches	4 Nos			
57.	Teflon Crucible		1		100 ml	
58.	Borosilicate conical flask with glass stopper	500 ml	2 Nos.			
59.	Borosilicate conical flask with screw cap	250 ml	3 Nos.			
60.	Petridish	100mm	4 Nos.			
61.	Syringe filters PTFE	Filtration rating 0.45 um, Diameter:13mm	100no :s			
62.	Borosilicate Volumetric Cylinder	100 ml , 5 ml	100 ml – 2 nos 5 ml- 3 no:s			
63.	Screwcap centrifuge tube	30 ml	12			

	round bottom (Tarson)		Nos.			
64.	Octagon spin bar, Magnetic spinning bars	Length* Diameter =25.4mm*8mm	5 Nos.			
65.	Polygon stir bars	Length* Diameter =20 mm*8mm	5 Nos.			
66.	Borosilicate Glass pipette Graduated with pipette bulb	5ml, 10ml,25 ml	2 each			
67.	Glass dropper pipette	3ml, 5ml	5 each			
68.	Beaker	10 ml	15 Nos.			
69.	Beaker	250 ml	4 Nos.			
70.	Beaker	500 ml	2 Nos.			
71.	Micropipette	100-1000µl	1 pack			
72.	Micropipette tip	2-200 µl	1 pack			
73.	Transfer pipette (Paster pipette )	3 ml-plastic	20 Nos.			
74.	Stirring rod (glass)		5 Nos.			
75.	Double ended microwire spatula		3 Nos.			
76.	Spatula 8"		4 Nos.			
77.	Spatula 6"		4 Nos.			
78.	Kimtech Purple Nitrile Powder free exam gloves medium		2 pack			
79.	Kimberly Nitrile gloves medium		2 pack			
80.	Tarson Sample container-50 ml		1 box			
81.	Tissue roll		50 Nos.			Hylax
82.	Cryogenic vials		250 Nos		10 ml	
83.	Glass Cuvette – 4 side transparent	340 nm-2500 nm Volume-3.5 ml Path length- 10mm Dimension – 45 x 12.5 x 12.5	2 Nos.			

84.	Quartz Cuvette – 4 side transparent	190 nm-2500 nm Volume-3.5 ml Path length-10mm Dimension – 45 x 12.5 x 12.5	2 Nos.			
85.	Quartz Cuvette – 2 side transparent	190 nm-2500 nm Volume-3.5 ml Path length-10mm Dimension – 45 x 12.5 x 12.5	2 Nos.			
86.	Quartz Cuvette Length – 4.5 cm Breadth – 2 cm Height – 1 mm	1 mm thickness (Z scan)	2 Nos.			

#### Scope of supply

The rates quoted must be inclusive of all taxes, cost of supply at site including loading and unloading charges if and any other applicable charges etc.

Warranty/Guarantee- The supplier shall guarantee to supply the items without any damage, if found defective, the entire expenditure for replace the item in this regard shall be borne by the supplier.

The firms wish to supply the item are requested to submit the quotation in sealed cover superscripted with “reference..... ” to the undersigned not later than 3:30pm on 05.06.2023. Quotations will be opened at 10:30am on next working day (06.06.2023) in the presence of the suppliers or their authorized agents. If the above date of closing/opening tender happens to be declare as a holiday or due to any other valid reason, the tender closing/opening process will be done on the next working day or the day fixed by the undersigned.

26.05.2023

Professor & Head