

Materials List for:

# Synthesis of Information-bearing Peptoids and their Sequence-directed Dynamic Covalent Self-assembly

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URL: <https://www.jove.com/video/60442>

DOI: [doi:10.3791/60442](https://doi.org/10.3791/60442)

## Materials

Name	Company	Catalog Number	Comments
1,4-Dioxane	Fisher Scientific	D1114	Certified ACS
2-(4-Hydroxyphenylazo)benzoic acid (HABA)	Millipore-Sigma	54793	Matrix substance for MALDI-MS; ≥99.5%
4-(2-Aminoethyl)aniline	Ontario Chemicals	A2076	98%
4-Cyanobenzaldehyde	Oakwood Chemical	049317	99%
4-Methylpiperidine	TCI America	P0445	≥98.0%
4-Toluenesulfonyl chloride	Oakwood Chemical	BR1703	99%
50 mL High Performance Centrifuge Tubes	VWR International	21008-240	Centrifuge Tubes used for automated synthesizer
Acetic acid	Fisher Scientific	A38-212	Glacial
Acetic anhydride	Fisher Scientific	A10	Certified ACS
Acetonitrile	Millipore-Sigma	34851	For HPLC; Gradient grade; ≥99.9%
All-plastic Norm-Ject syringes	Thermo Fisher Scientific	S7510-10	Luer-Slip Syringe
Allyl chloroformate	Acros Organics	221741000	97%
Bromoacetic acid	Alfa Aesar	A14403	≥98.0%
Chloroform	Millipore-Sigma	288306	Anhydrous; ≥99%; Contains 0.5-1.0% ethanol as stabilizer
Chloroform-d	Acros Organics	AC320690075	For NMR; 99.8 atom % D; Packaged in 0.75 ml ampoules
Dichlorodimethylsilane	Acros Organics	1133100	≥99.0%
Dichloroethane	Fisher Scientific	E175	Certified ACS
Dichloromethane	Fisher Scientific	D37-4	Stabalized; Certified ACS
Diethyl ether	Acros Organics	615080010	Anhydrous; ACS reagent
Diethylene glycol monoethyl ether	TCI America	E0048	≥99.0%
Ethanol	Decon Labs	2701	200 Proof; Anhydrous
Ethylene glycol	Fisher Scientific	E178	Certified
Fmoc-Photolabile SS resin	CreoSalus	SA50785	100-200 mesh; 1% DVB
Glass Peptide Vessel	Chemglass	CG-1866-02	Solid Phase, T-Bore PTFE Stpk, Vacuum, Medium Frit, GL 25 Thread
LC-6AD HPLC pumps	Shimadzu Corporation		Equipment
LED 405nm	ThorLabs	M405L2-C1	405 nm LED used for photocleavage of peptoid
LED Driver	ThorLabs	LEDD1B	Driver for LED light used in photocleavage of peptoid

Liberty Blue Automated Peptide Synthesizer	CEM Corporation		Equipment
Lithium aluminum hydride	Millipore-Sigma	199877	Powder; Reagent grade; 95%; CAUTION: Mildly pyrophoric, handle under inert gas and protect from moisture
Luna C18 analytical RP-HPLC column	Phenomenex	00G-4252-E0	Equipment
Luna C18 preparatory RP-HPLC column	Phenomenex	00G-4253-P0-AX	Equipment
Methanol	Fisher Scientific	A412	Certified ACS
Microliter Syringe	Hamilton Company	80700	Cemented Needle (N)
N,N'-Diisopropylcarbodiimide (DIC)	Oakwood Chemical	M02889	≥99.0%; CAUTION: DIC is hazardous to eyes, skin, via respiratory inhalation, and may cause skin sensitization
N,N-Dimethylformamide	Millipore-Sigma	319937	ACS reagent; ≥99.8%
Nitric acid	Fisher Scientific	A200-212	Certified ACS Plus
Nitrogen gas	Cryogenic Gases		Contents under pressure, may explode if heated
Phenylsilane	Oakwood Chemical	S13600	97%
Prominence SPD-10A UV/vis Detector	Shimadzu Corporation		Equipment
p-Toluenesulfonic acid monohydrate	Millipore-Sigma	402885	ACS reagent; ≥98.5%
Scandium(III) triflate	Oakwood Chemical	009343	99%
Single-use Needle	Exel International	26420	18G x 1 1/2"
Sodium azide	Oakwood Chemical	094448	99%; CAUTION: NaN <sub>3</sub> may react with lead and copper which results in the formation of highly explosive metal azides. It is acutely toxic and fatal if swallowed or in contact with skin.
Sodium bicarbonate	Fisher Scientific	S233	Powder; Certified ACS
Sodium hydroxide	Fisher Scientific	S318-100	Pellets; Certified ACS
Sodium sulfate	Fisher Scientific	S421-500	Anhydrous; Granular; Certified ACS
Syringe Filter 0.45 μm	VWR International	28145-497	PTFE, Syringe Filters with Polypropylene Housing
Tetrahydrofuran	Fisher Scientific	T397	Certified
Tetrakis(triphenylphosphine) palladium(0)	Oakwood Chemical	034279	98%
Toluene	Fisher Scientific	T324	Certified ACS
Triphenylphosphine	Oakwood Chemical	037818	99%