

# SPUTTERING TARGETS

Princeton Scientific Corp. offers Sputtering targets made of metals, non-metals and chemical compounds with purities ranging from **99.9%** to **99.9999%**. We offer standard, single element, pure metals and custom compounds. We also have various geometric shapes: round, rectangular, as well as multi-tile and stepped constructions are possible.

Please review our standard and specialty target list for more information. Princeton Scientific can produce sputtering targets to your specific needs. We will help to select appropriate target material, fabrication process, and bonding assembly that ensures the success of your thin film deposition process. Our sputter targets are prepared either by a melt or a powder metallurgical process.

We also provide an assorted array of backing plates for your systems requirements. Also, our bonding services include various metallic or silver epoxy techniques.



### BORIDES

CrB<sub>2</sub>  
HfB<sub>2</sub>  
LaB<sub>6</sub>  
Mo<sub>2</sub>B<sub>6</sub>  
NbB<sub>2</sub>  
TaB<sub>2</sub>  
TiB<sub>2</sub>  
WB  
W<sub>2</sub>B  
VB<sub>2</sub>  
ZrB<sub>2</sub>  
and others

### CARBIDES

B<sub>4</sub>C  
Cr<sub>3</sub>C<sub>2</sub>  
HfC  
Mo<sub>2</sub>C  
NbC  
SiC  
TaC  
TiC  
WC  
WC 6%Co  
WC 12%Co  
VC  
ZrC  
and others

### FLUORIDES

AlF<sub>3</sub>  
BaF<sub>2</sub>  
CaF<sub>2</sub>  
CeF<sub>3</sub>  
LaF<sub>3</sub>  
PbF<sub>2</sub>  
LiF  
MgF<sub>2</sub>  
KF  
Re/NaF  
Na<sub>3</sub>AlF<sub>6</sub>  
ThF<sub>4</sub>  
YF<sub>3</sub>  
and others

### NITRIDES

AlN  
BN  
HfN  
NbN  
Si<sub>3</sub>N<sub>4</sub>  
TaN  
TiN  
VN  
ZrN  
and others

### SILICIDES

CrSi<sub>2</sub>  
Cr<sub>3</sub>Si  
HfSi<sub>2</sub>  
MoSi<sub>2</sub>  
NbSi<sub>2</sub>  
PtSi  
TaSi<sub>2</sub>  
Ta<sub>5</sub>Si<sub>3</sub>  
TiSi<sub>2</sub>  
Ti<sub>5</sub>Si<sub>3</sub>  
WSi<sub>2</sub>  
VSi<sub>2</sub>  
V<sub>3</sub>Si  
ZrSi<sub>2</sub>  
and others

### SULFIDES / SELENIDES / TELLURIDES

As<sub>2</sub>S<sub>3</sub>  
CdSe  
CdS  
CdTe  
PbSe

PbS  
PbTe  
MoSe<sub>2</sub>  
MoS<sub>2</sub>  
MoTe<sub>2</sub>

NbSe<sub>2</sub>  
Nb-S  
NbTe<sub>2</sub>  
TaSe<sub>2</sub>  
TaS<sub>2</sub>

TaTe<sub>2</sub>  
WSe<sub>2</sub>  
WS<sub>2</sub>  
WTe<sub>2</sub>  
ZnSe

ZnS  
ZnTe  
and others



### METALS

Aluminium	Chromium	Lead	Platinum	Tantalum
Antimony	Cobalt	Lithium	Potassium	Tellurium
Barium	Gallium	Magnesium	Rhenium	Tin
Beryllium	Germanium	Manganese	Rhodium	Titanium
Bismuth	Gold	Molybdenum	Rubidium	Tungsten
Baron	Hafnium	Niobium	Ruthenium	Vanadium
Cadmium	Indium	Nickel	Selenium	Zinc
Calcium	Iridium	Osmium	Silicon	Zirconium
Carbon	Iron	Palladium	Strontium	

### RARE EARTH

Cerium	Gadolinium	Neodymium	Terbium	Various Rare Earth Alloys
Dysprosium	Holmium	Praseodymium	Thulium	
Erbium	Lutetium	Samarium	Ytterbium	
Europium	Lanthanum	Scandium	Yttrium	

### ALLOYS

Al/B	Au/Pd	Co/Ni	Ge/Si	Pt/Ru
Al/Cu	Au/Pt	Co/Ta/Zr	Ge/Te	Pt/Ag
Al/Cu/Si	Au/Sn	Cr/SiO <sub>2</sub> Cermet	In/Sn	Sb/In
Al/Cr	Au/Zn	Cu/Al	Ir/Mn	Sb/In/Sn
Al/Li	Bi/Sb	Cu/Cr	Ni/Cr	Si/Al
Al/Mg	Bi/Sb/Se	Cu/Ga	Ni/Fe	Si/Cr
Al/Si	Bi/Sb/Se/Te	Cu/Ni	Ni/Ti	Ta/Ti
Al/Ti	Bi/Sb/Te	Cu/Sn	Ni/V	Ti/Al
Au/Sb	Bi/Se	Fe/Al/Si	Ni/Zr	Ti/W
Au/Ag	Bi/Te	Fe/Cr	Os/Ru	Ti/Zr
Au/B	Cd/Te	Fe/Mn	Pb/Se	W/Ti
Au/Be	Co/Cr	Fe/Ru/Ga/Si	Pb/Te	Zn/Al
Au/Ge	Co/Fe	Fe/Si	Pb/Se/Te	Zr/V
Au/Ir	Co/Nb/Zr	PFe/Si/B/C	Pd/Pt	And others

### OXIDES

Al <sub>2</sub> O <sub>3</sub>	CuO	PbZrO <sub>3</sub>	Supercond.	Y <sub>2</sub> O <sub>3</sub>
Sb <sub>2</sub> O <sub>3</sub>	HfO <sub>2</sub> unstab.	LiNbO <sub>3</sub>	SrO	ZnO
BaTiO <sub>3</sub>	HfO <sub>2</sub> /CaO	MgO	SrTiO <sub>3</sub>	ZnO dop.
Bi <sub>2</sub> O <sub>3</sub>	HfO <sub>2</sub> /Y <sub>2</sub> O <sub>3</sub>	MoO <sub>3</sub>	SrZrO <sub>3</sub>	ZrO <sub>2</sub> unstab.
Bi <sub>2</sub> TiO <sub>5</sub>	In <sub>2</sub> O <sub>3</sub>	Nb <sub>2</sub> O <sub>3</sub>	Ta <sub>2</sub> O <sub>5</sub>	ZrO <sub>2</sub> /CaO
Bi <sub>4</sub> Ti <sub>3</sub> O <sub>12</sub>	ITO	Nb <sub>2</sub> O <sub>5</sub>	ThO <sub>2</sub>	ZrO <sub>2</sub> /Y <sub>2</sub> O <sub>3</sub>
BiTiO <sub>3</sub>	LaAlO <sub>3</sub>	Re <sub>2</sub> O <sub>3</sub>	SnO <sub>2</sub>	and others
CeO <sub>2</sub>	La <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	TiO <sub>2</sub>	
CrO <sub>3</sub>	PbTiO <sub>3</sub>	SiO	WO <sub>3</sub>	

