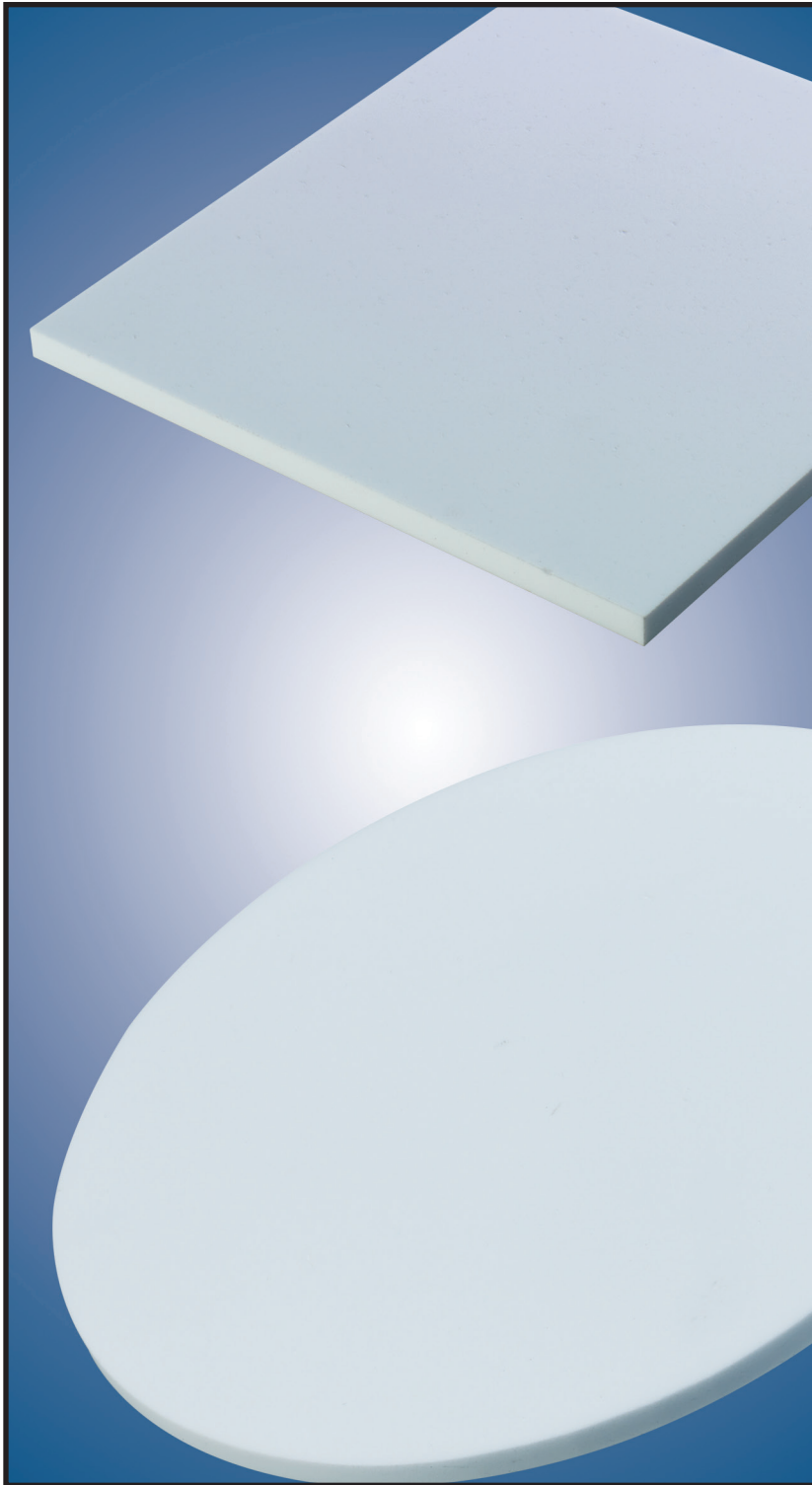


Lithium Orthophosphate



Sputtering Targets



Kurt J. Lesker
Company

MATERIALS
DIVISION

Applications

- Reactively deposited in partial pressure of nitrogen to produce LIPON (lithium phosphorous oxynitride)
- Electrolyte layer in rechargeable thin film batteries

Features

- High purity
- High density
- Stoichiometric
- Phase pure
- Homogenous

Manufacturing Process

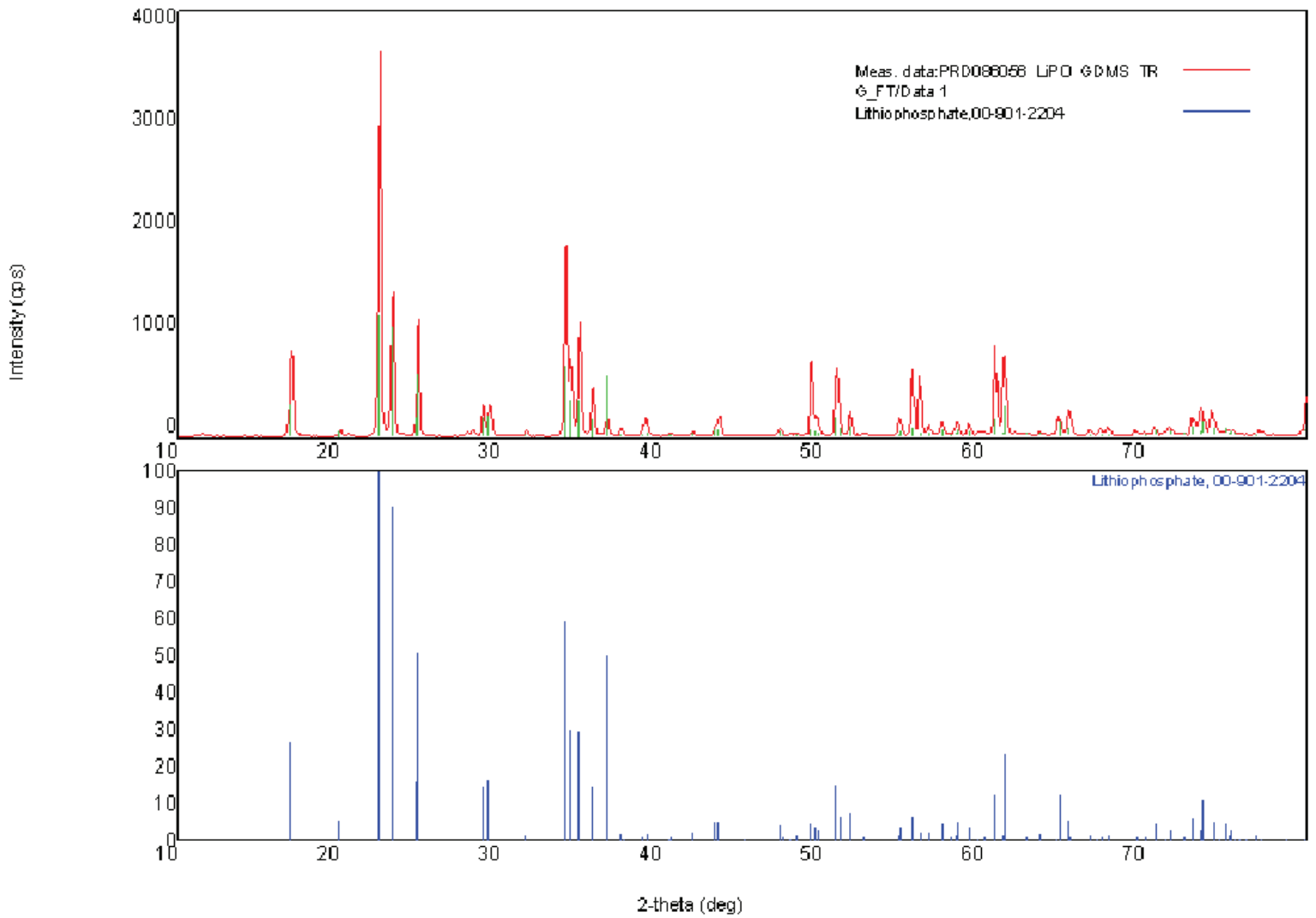
- In-house powder synthesis
 - High purity precursor materials
 - Wet chemistry process utilized for powder synthesis
 - High energy mixing
 - Specially formulated calcination schedule
 - Particle sizing processes
- Multiple step densification
 - Proprietary processes employed for pressing and sintering
- Cleaning and final packaging
 - Cleaned for use in vacuum
 - Protection from environmental contaminants
 - Protection during shipment

Options

- 99.95% purity
- Custom compositions may be available upon request
- Circular targets up to 12" (300 mm) diameter
- Planar tiles up to 8" (250 mm) X 5" (125 mm) for larger target configurations
- Smaller sizes also available for R&D applications
- Sputtering target bonding service

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X-Ray Diffraction Pattern of Sintered Li_3PO_4 Sputtering Target



Specifications

Typical Analysis - 99.95% (3N5) Purity

Metallic Impurities, ppm by weight

Al	Ba	Co	Cr	Fe	Mg	Mo	Na	Ni	Si	Zn	Zr
<30	<10	<10	<110	<160	<5	<5	<10	<50	<50	<10	<50

Theoretical Density	2.46 g/cm ³
Relative Density	2.26 g/cm ³ minimum
Appearance	White, may have blue spots

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