



# Perovskite Precursor Products



## About 5N+

### Enabling performance for more than 25 years



Trusted partner for ultra-high purity specialty semiconductors with 25-year track record



Preferred critical materials supplier to solar power sector for thin-film PV applications



Major supplier with Western industrial-scale presence for a range of applications, enabling secure and transparent supply chains



Sourcing advantage through strategic global footprint and connections with upstream industrial partners

### Trusted partner with unique capabilities



Specialized producer of high-purity, highly stoichiometric semiconductor materials and compounds



World-class manufacturing and upstream refining capabilities with proven ability to scale production cost-effectively



Adhere to stringent internationally recognized safety, quality, energy, environment and resource management standards, including toxic materials handling

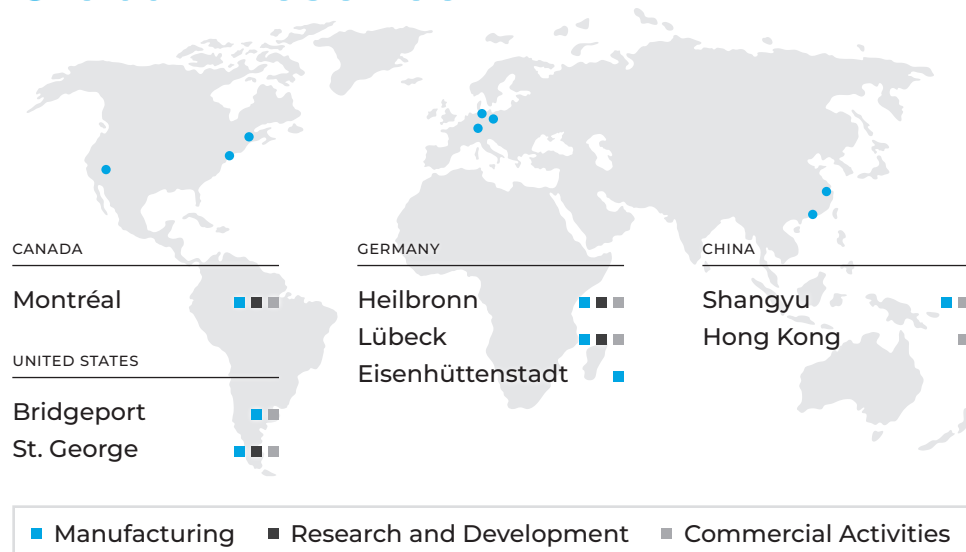


Strong R&D and technical expertise enabling continuous innovation and process improvements

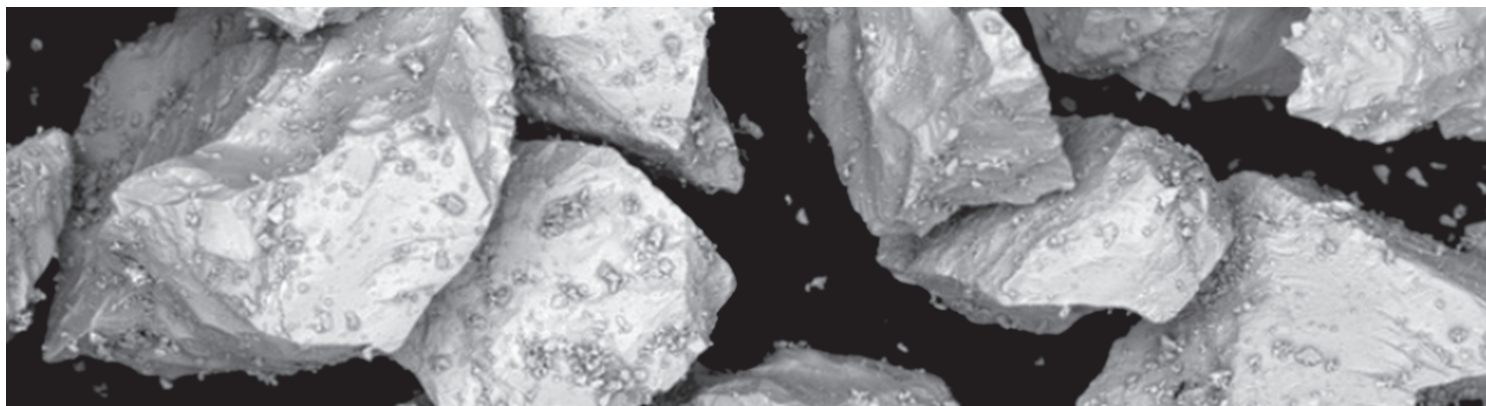


Partnership approach to product development and customization to meet customer specifications

## Global Presence



Headquartered in Montréal, Quebec, Canada, 5N+ (TSX: VNP) is a leading global producer of specialty semiconductors and performance materials with more than 800 employees and strategically located R&D, manufacturing operations and commercial centers in North America, Europe and Asia. 5N+ deploys a range of proprietary and proven technologies to develop and manufacture its products which enable various applications in several key industries, including renewable energy, security, space, pharmaceutical, medical imaging and industrial.



## Our Suite of Perovskite Precursors

Stable product  
quality and rapid  
execution

Particle size and  
morphology  
tailoring capabilities

No minimum  
quantity  
requirements

Capacity to produce up  
to commercial volumes  
with further scaling  
upon client request

### Lead and Cesium Halides ( $\text{PbI}_2$ , $\text{PbBr}_2$ , $\text{PbCl}_2$ , $\text{CsI}$ , $\text{CsCl}$ and $\text{CsBr}$ )



<b>Purity</b>	4N5+
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<b>Particle size and form factor</b>	Tailored particle size
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<b>Packaging</b> (under inert gas atmosphere)	1kg-10kg*
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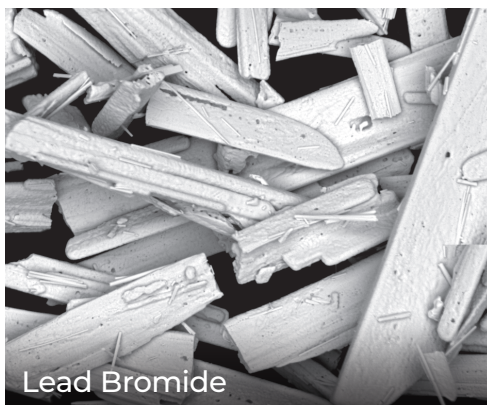
*\* Other quantities and packaging options available  
upon request*

### Specialized Halides

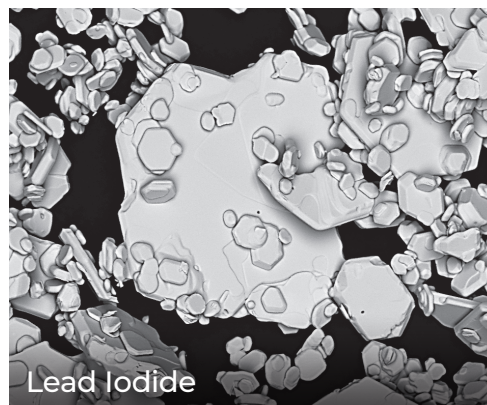
Additional inorganic and  
hybrid materials under  
development and available  
on request.



Lead Chloride



Lead Bromide



Lead Iodide



### Contact Us

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