

XG-SiG™ Energy Storage Materials **Silicon-Graphene Li-ion battery anode**

High Energy Anode – XG Sciences' *AN-S-100* delivers high specific capacity in an xGnP® graphene-stabilized silicon anode material for enhanced run-time portable electronics. Our proprietary manufacturing process coats silicon particles with highly conductive, flexible graphene platelets establishing a network that provides silicon with robust mechanical support and high rate capacity.



AN-S-100 Si-graphene anode properties

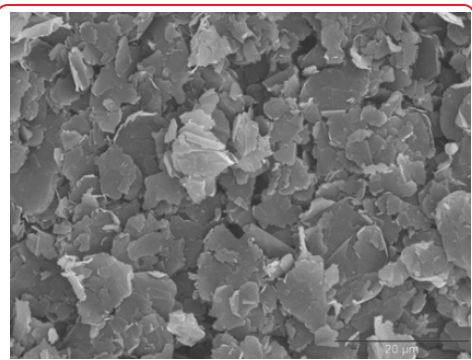
Reversible capacity	800 mAh/g
1 st cycle efficiency	80 %
Charge/discharge rate	C/2
Discharge temperature	30 deg C
Recommended binder	Polyacrylic acid (PAA)

General characteristics

- ✳ Composition: Silicon graphene
- ✳ Morphology: Porous aggregates
- ✳ High reversible capacity
- ✳ Efficient Li+ storage
- ✳ Enhanced cycle life

xGnP® Graphene - Conductive additive

xGnP® graphene nanoplatelets are short stacks of graphene sheets in a platelet shape. Typical platelet electrical conductivity parallel to the surface is 10^7 S/m.



xGnP® Graphene bulk properties

Appearance	Black granules
Bulk density	0.1 g/cc
Carbon Content	>99.5%
Oxygen content	< 1 %

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