

## **Technical Data Sheet**

# ACS Material Si/C Composite Anode Material

## **Table of Contents**

1 – Characterizations

2 – Application Fields

#### **Contact Information:**

Manufacturer: ACS Material, LLC. Address: 959 E Walnut St., Suite 100,

Pasadena, CA 91106, USA Phone: (866)-227-0656

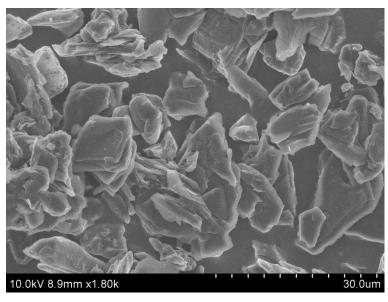
Fax: (781)-518-0284

E-Mail: contact@acsmaterial.com

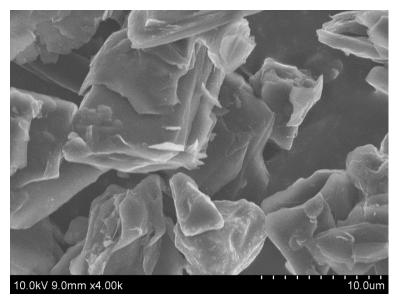
Revision: 0812018

# 1. Characterizations

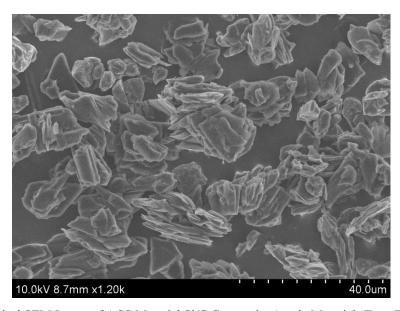
Type:		Type A	Type B
Appearance:		Black grey powder	Black grey powder
Si Content (wt%):		~8	~18
Particle Size (D50) (μm):		15.9	15.7
Real Density (g/cm <sup>3</sup> ):		2.26	2.26
Tap Density (g/cm <sup>3</sup> ):		0.95	1.01
BET Surface Area (m <sup>2</sup> /g):		1.6	1.7
For Reference:	Discharge Capacity (mAh/g):	449.2	546.3
	First Discharge Efficiency (%):	87	85.7



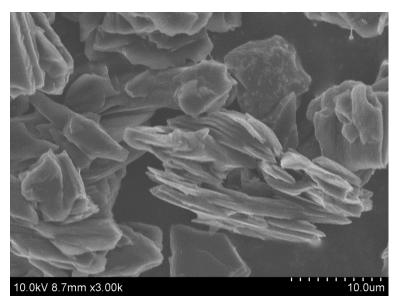
Typical SEM Image of ACS Material Si/C Composite Anode Material- Type A (1)



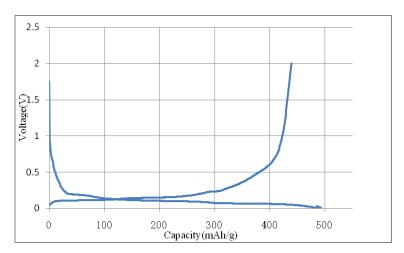
Typical SEM Image of ACS Material Si/C Composite Anode Material- Type A (2)



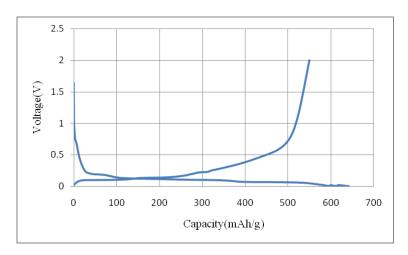
Typical SEM Image of ACS Material Si/C Composite Anode Material- Type B (1)



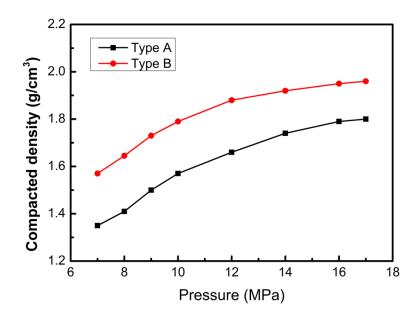
Typical SEM Image of ACS Material Si/C Composite Anode Material- Type B (2)



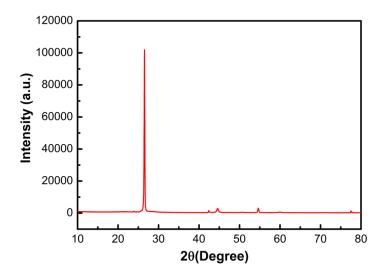
Charge-discharge Curve of ACS Material Si/C Composite Anode Material- Type A



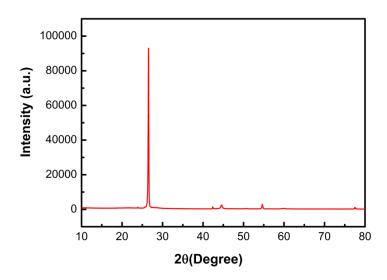
Charge-discharge Curve of ACS Material Si/C Composite Anode Material- Type B



Pressure-compaction Curve of ACS Material Si/C Composite Anode Material



XRD Analysis of ACS Material Si/C Composites Negative Electrode-Type A



XRD Analysis of ACS Material Si/C Composites Negative Electrode-Type B

### 2. Application Fields

The theoretical specific capacity of the graphite anode material is 372mAh/g, and the graphite anode material with better performance can reach 360mAh/g. But the Si/C composites negative electrode materials of ACS Material, the current capacity of these two products were 450mAh/g and 500mAh/g, which means that the mileage increased a lot! Cycle performance can reach 1500 cycles, capacity retention rate can reach 80%.

**Disclaimer:** ACS Material, LLC believes that the information in this Technical Data Sheet is accurate and represents the best and most current information available to us. ACS Material makes no representations or warranties either express or implied, regarding the suitability of the material for any purpose or the accuracy of the information contained within this document. Accordingly, ACS Material will not be responsible for damages resulting from use of or reliance upon this information.