

高熱導、抗突波之鋰離子電池三維界面技術

執行單位

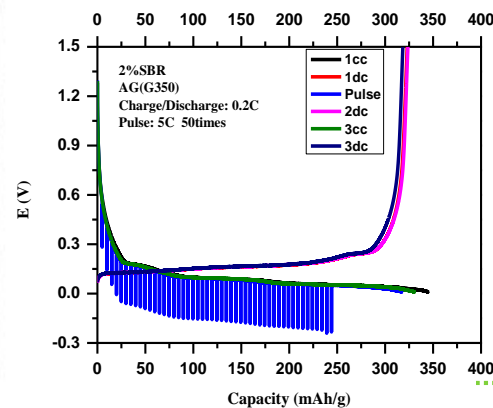
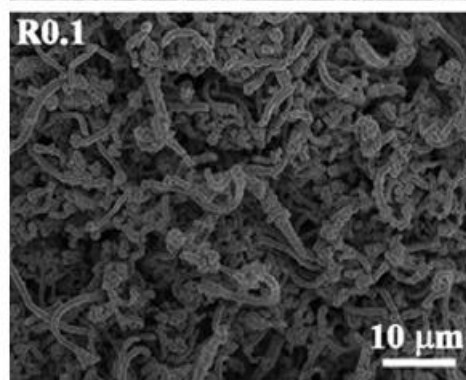
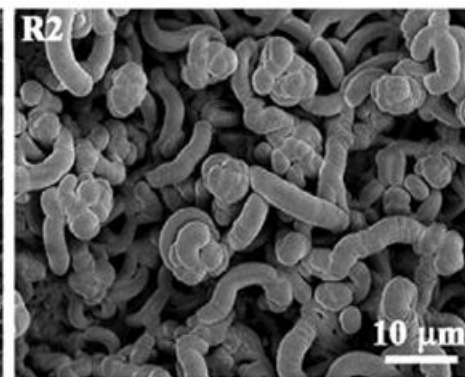
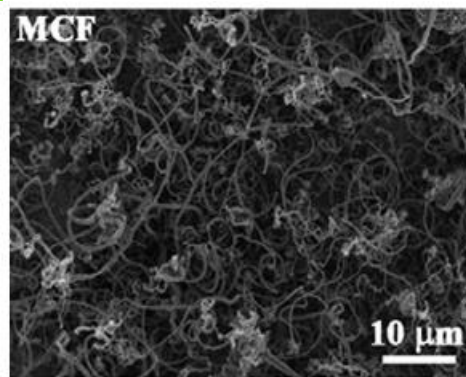
逢甲大學

計畫主持人

邱國峰

- 由正負極材料之改質並結合三維結構集流層，開發耐突波、高熱導、高安全性、高充電效率及循環性佳之綠能電網用鋰離子電池。

No.	專利名稱
1	適用於鋰電池的電極材料、其製造方法，及適用於鋰電池的電極
2	適用於鋰離子電池負極的含矽複合材料及負極材料組成物
3	適用於鋰離子電池負極的應力緩衝含矽複合顆粒及其製法
4	適用於鋰離子電池的負極材料組成物
5	適用於鋰離子電池的負極材料組成物的製備方法



- 技術介紹: 開發材料界面技術並應用於(1) LiFePO_4 、NMC 正極材料及三維極板之界面技術研發；(2)C/Si負極材料及三維極板之介面技術研發；(3)低電阻、高熱導三維集流板之研發。分成三項子計畫，開發耐突波、高熱導、高安全性、高充電效率及循環性佳之鋰離子電池。延續本團隊於第一期國家型能源計畫之成果，持續開發可適用於綠色電網及動力用途之鋰離子電池。
- 新穎正極材料、負極材料、集流板之介面技術可技轉。
- 碳改質之矽基負極技術已技轉光宇材料公司。

3-D interface technology for high thermal conductive & anti-pulse lithium ion batteries

Execution Unit

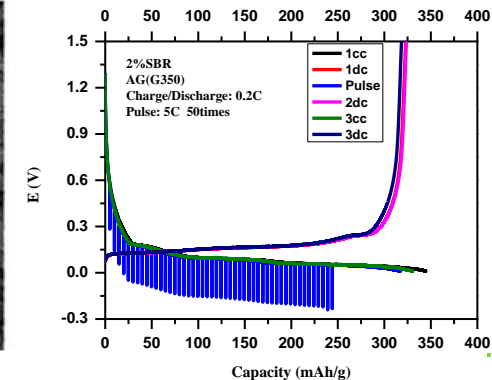
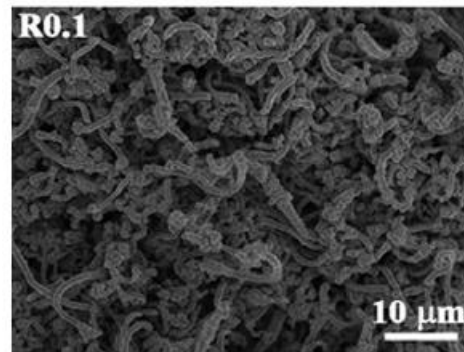
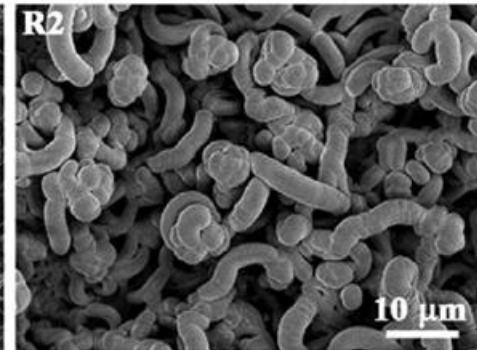
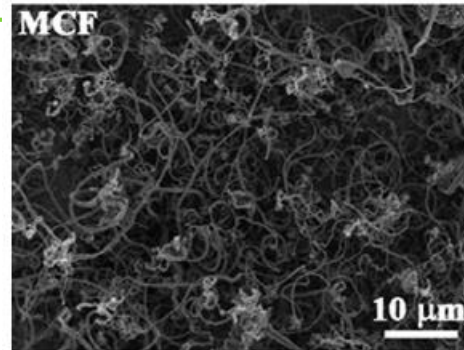
FENG Chia University

Project Director

Prof. Kuo-Feng Chiu

- Modifying cathode/anode materials and 3-D current collectors for anti-pulse-current/voltage and high thermal conductivity lithium ion batteries used in green energy grids.

No.	Patents
1	Lithium battery electrode materials and manufacturing methods
2	Lithium ion battery anode with Si composites
3	Si composite with stress buffers for lithium ion batteries
4	Anode materials and additives for lithium ion batteries
5	Manufacturing method for lithium ion battery anode



- Technology Introduction: For green energy grid applications. (1)Interface technologies for LiFePO₄, NMC and related cathode materials, and 3-D current collectors ; (2) 1)Interface technologies for C/Si anodes and 3-D current collectors ; (3)Low interfacial resistivity, high thermal conductivity current collectors.
- Interface technologies for novel cathodes, anodes, and current collectors.
- C modified Si anode technology has been transferred to Getgreenenergy Ltd.