### Accepted Manuscript

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PII:	S0013-4686(16)31356-1
DOI:	http://dx.doi.org/doi:10.1016/j.electacta.2016.06.039
Reference:	EA 27480
To appear in:	Electrochimica Acta
Received date:	4-4-2016
Revised date:	30-5-2016
Accepted date:	7-6-2016

Please cite this article as: Rizwan Ur Rehman Sagar, Nasir Mahmood, Florian J.Stadler, Tauseef Anwar, S.T.Navale, Khurum Shehzad, Bing Du, High Capacity Retention Anode Material for Lithium Ion Battery, Electrochimica Acta http://dx.doi.org/10.1016/j.electacta.2016.06.039

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## ACCEPTED MANUSCRIPT

#### High Capacity Retention Anode Material for Lithium Ion Battery

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#### **Research Highlights**

- Highly graphitized GF was synthesized by using chemical vapor deposition (CVD) that is never reported previously to the best of our knowledge.
- High reversible specific capacity (497 mAhg<sup>-1</sup>) was detected by using undoped graphene foam (GF) as anode material in lithium ion battery (LIB).
- Excellent capacity retention was observed; as a result capacity fading was very small in comparison to the previous literature.

**Abstract:** Capacity fading of lithium ion batteries (LIBs) is a huge hurdle for their commercial utilization that may be reduced by the insertion of high quality anode material. Herein, we introduce

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