

**Professor Sha Yin**

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<http://www.avrcgroup.com/col.jsp?id=114>  
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**Education, etc.:**

July 2015 – Present: Assistant Professor  
 Sept. 2013 ~ July. 2015: Postdoc Associate. Beihang University (BUAA)  
 Sept. 2007 ~ July. 2013: Ph.D. Harbin Institute of Technology (HIT) (Major: Engineering Mechanics)  
 Sept. 2003 ~ July. 2007: B.S. Harbin Institute of Technology (HIT) (Major: Engineering Mechanics)

**Research interests:**

Light-weight composite material fabrication and mechanical behaviors

**Selected Publications:**

S. Yin, L. Ma, L.Z. Wu, “Carbon fiber composite lattice structure filled with silicon rubber”, *Procedia Engineering*, VOL. 10, pp 3191-3194, 2011  
 Sha Yin, Alan J. Jacobsen, Linzhi Wu and Steven R. Nutt, “Inertial stabilization of flexible polymer micro-lattice materials”, *Journal of Materials Science*, Vol. 48, No. 19, pp 6558-6566, October 2013  
 Sha Yin, Linzhi Wu, Steven Nutt, “In-plane compression of hollow composite pyramidal lattice sandwich columns”, *Journal of Composite Materials*, Vol. 48, No. 11, pp 1337-1346, May 2014  
 Sha Yin, Linzhi Wu, Jinshui Yang, Li Ma, Steven Nutt, “Damping and low-velocity impact behavior of filled composite pyramidal lattice structures”, *Journal of Composite Materials*, Vol. 48, No. 15, pp 1789-1800, June 2014  
 Yin, S., Li, J., Liu, B., Meng, K., Huan, Y., Nutt, S., Xu, J., Honeytubes: Hollow Lattice Truss Reinforced Honeycombs for Crushing Protection, *Composite Structures* (2016), doi: <http://dx.doi.org/10.1016/j.compstruct.2016.11.007>  
 Sha Yin, Jiani Li, Binghe Liu, Kangpei Meng, Yong Huan, Steven R. Nutt and Jun Xu, “Honeytubes: Hollow lattice truss reinforced honeycombs for crushing protection”, *Composite Structures*, Vol. 160, pp 1147-1154, January 2017

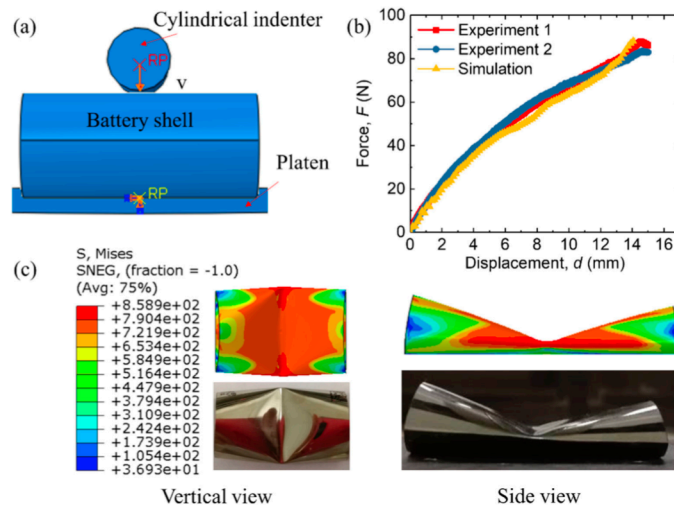


Fig. 7. The illustrations of (a) the FE model of indentation, (b) the force-displacement curves obtained from experiment and simulation, (c) the deformed configuration of samples in both experiment and simulation.

From: Lubing Wang, Sha Yin, Zhexiong Yu, Yonggang Wang, T.X. Yu, Jing Zhao, Zhengchao Xie, Yangxing Li, Jun Xu, “Unlocking the significant role of shell material for lithium-ion battery safety”, *Materials and Design*, Vol. 160, pp 601-610, 2018

Jianxing Hu, Sha Yin and Jun Xu, "Compression behavior and energy absorption capacity of woven flax-epoxy composite under various strain rates", EPJ Web of Conferences, Vol. 183, 02062, 2018 (DYMAT 2018)

Jianxing Hu, Sha Yin, T.X. Yu and Jun Xu, "Dynamic compressive behavior of woven flax-epoxy-laminated composites", International Journal of Impact Engineering, Vol. 117, pp 63-74, 2018

Lubing Wang, Sha Yin, Zhexun Yu, Yonggang Wang, T.X. Yu, Jing Zhao, Zhengchao Xie, Yangxing Li, Jun Xu, "Unlocking the significant role of shell material for lithium-ion battery safety", Materials and Design, Vol. 160, pp 601-610, 2018

Wen Zhang, Sha Yin, T.X. Yu and Jun Xu, "Crushing resistance and energy absorption of pomelo peel inspired hierarchical honeycomb", International Journal of Impact Engineering, Vol. 125, pp 163-172, March 2019

Lubing Wang, Sha Yin and Jun Xu, "A detailed computational model for cylindrical lithium-ion batteries under mechanical loading: From cell deformation to short-circuit onset", Journal of power Sources, Vol 413, pp 284-292, 2019

Sha Yin, Dianhao Chen and Jun Xu, "Novel propagation behavior of impact stress wave in one-dimensional hollow spherical structures", International Journal of Impact Engineering, Vol. 134, Article 103368, December 2019

Sha Yin, Huitian Wang, Jianxing Hu, Yaobo Wu, Yongbin Wang, Shinqing Wu and Jun Xu, "Fabrication and anti-crushing performance of hollow honeytubes", Composites Part B: Engineering, Vol. 179, Article 107522, 15 December 2019