



CAFOE  
June 22-24, 2017  
Shanghai, China

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# *Electrochemical Energy Storage*



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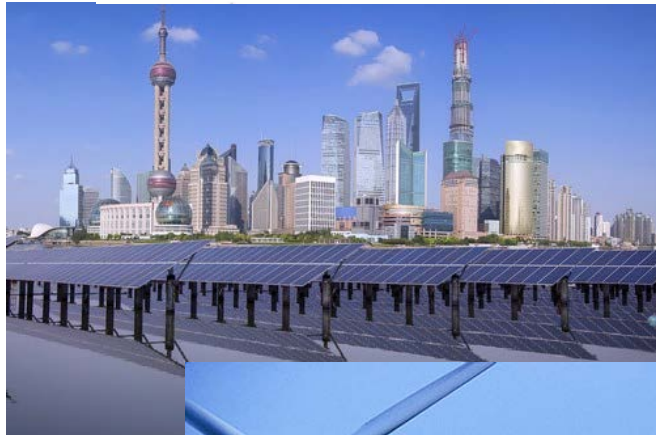
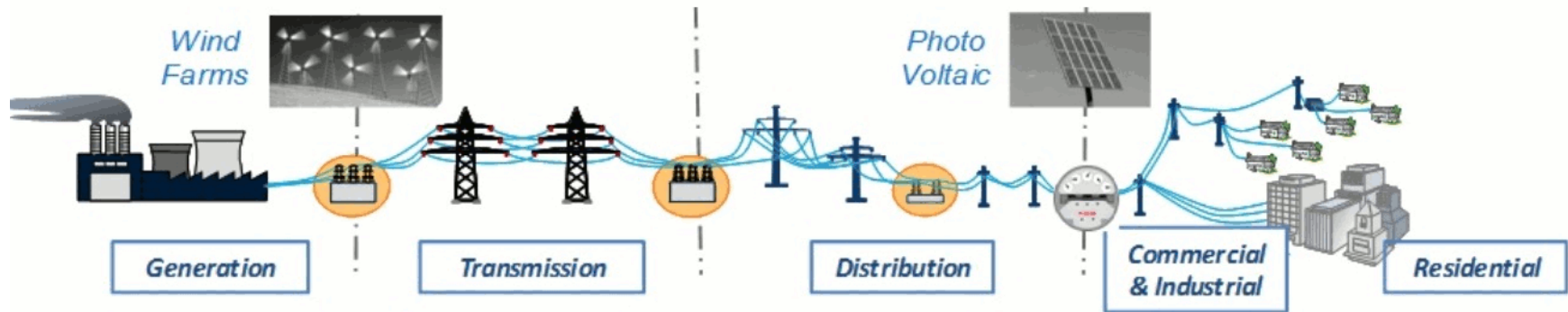
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Senior Engineer w/Professorship  
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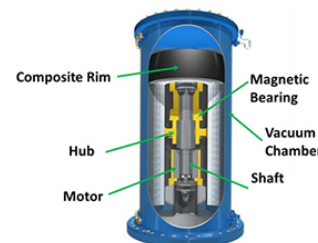
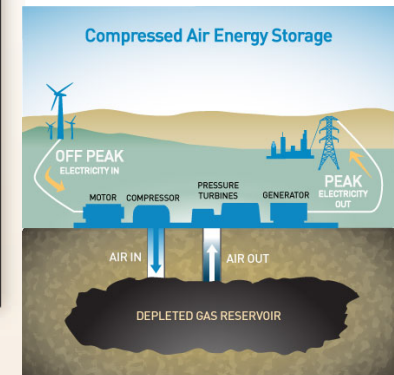
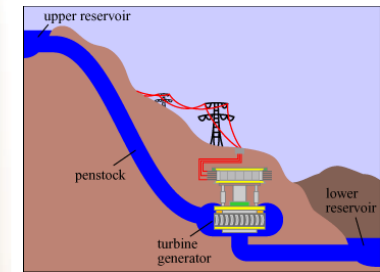
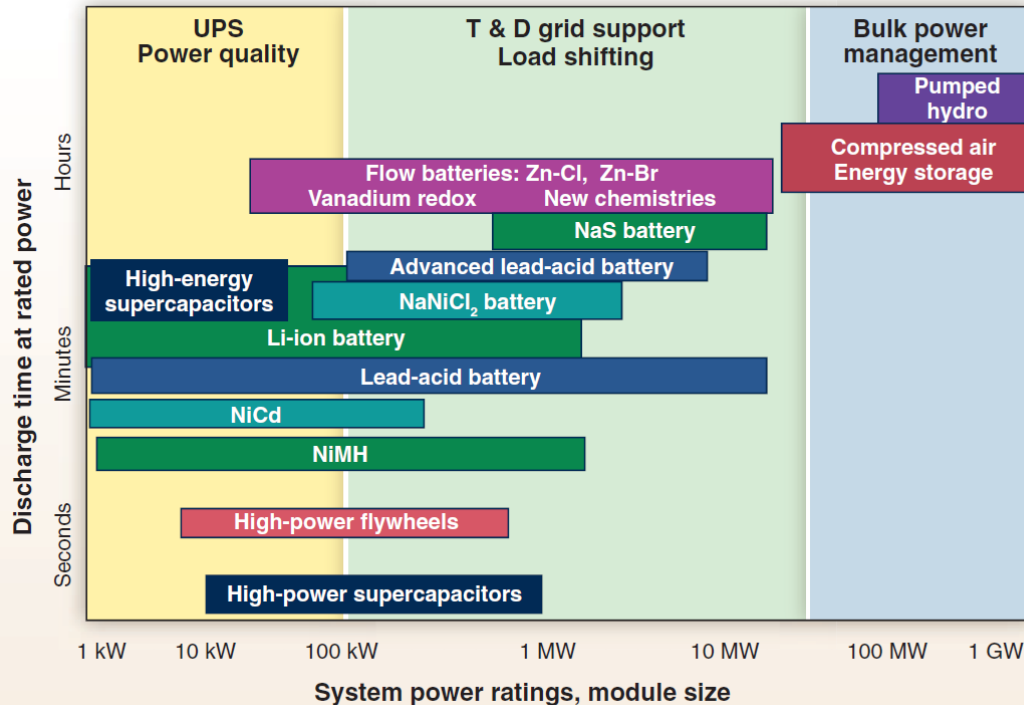
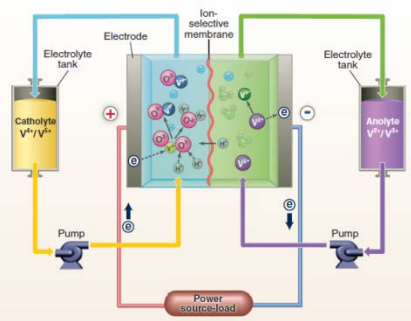
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# Overview of Types of Energy Storage

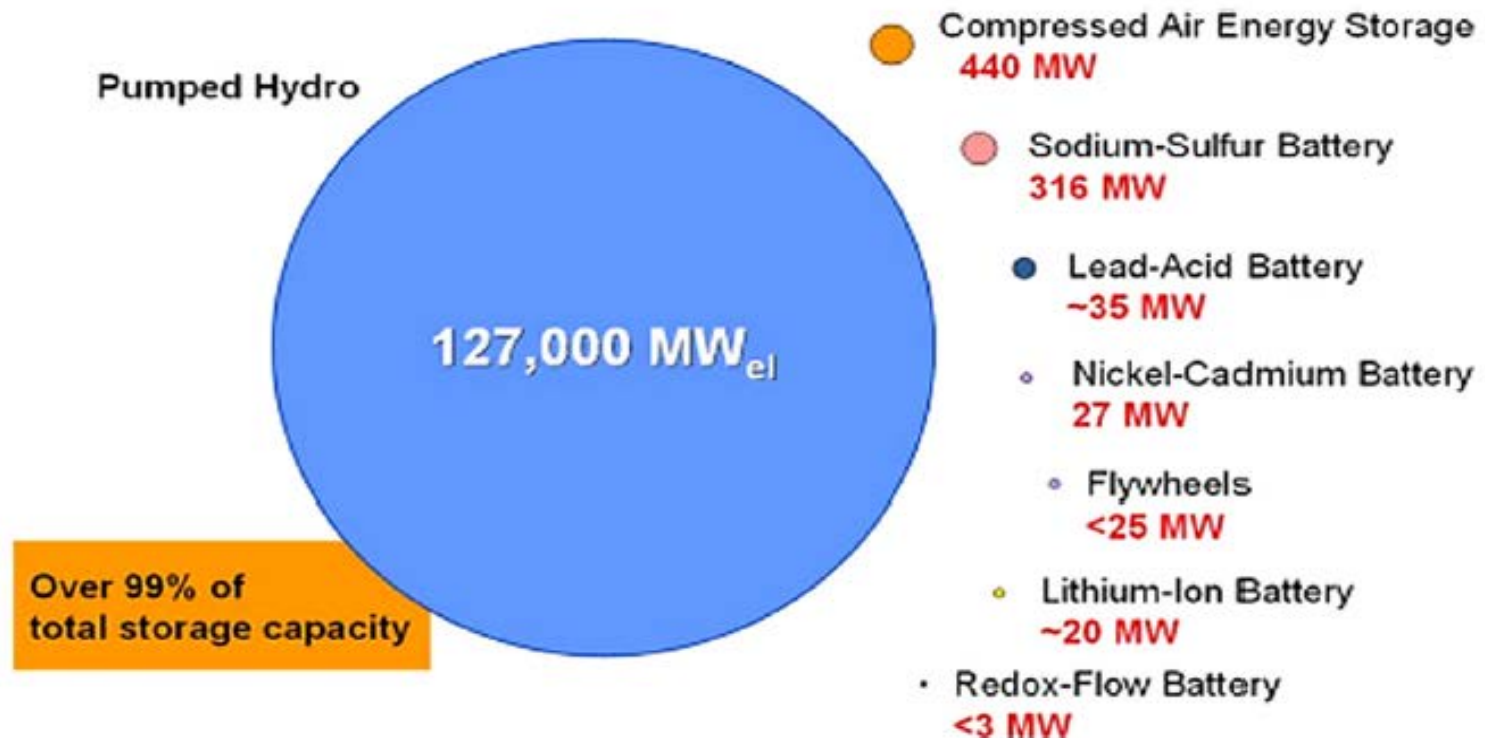


Source: Beacon Power, LLC





# *Overview of Types of Energy Storage*

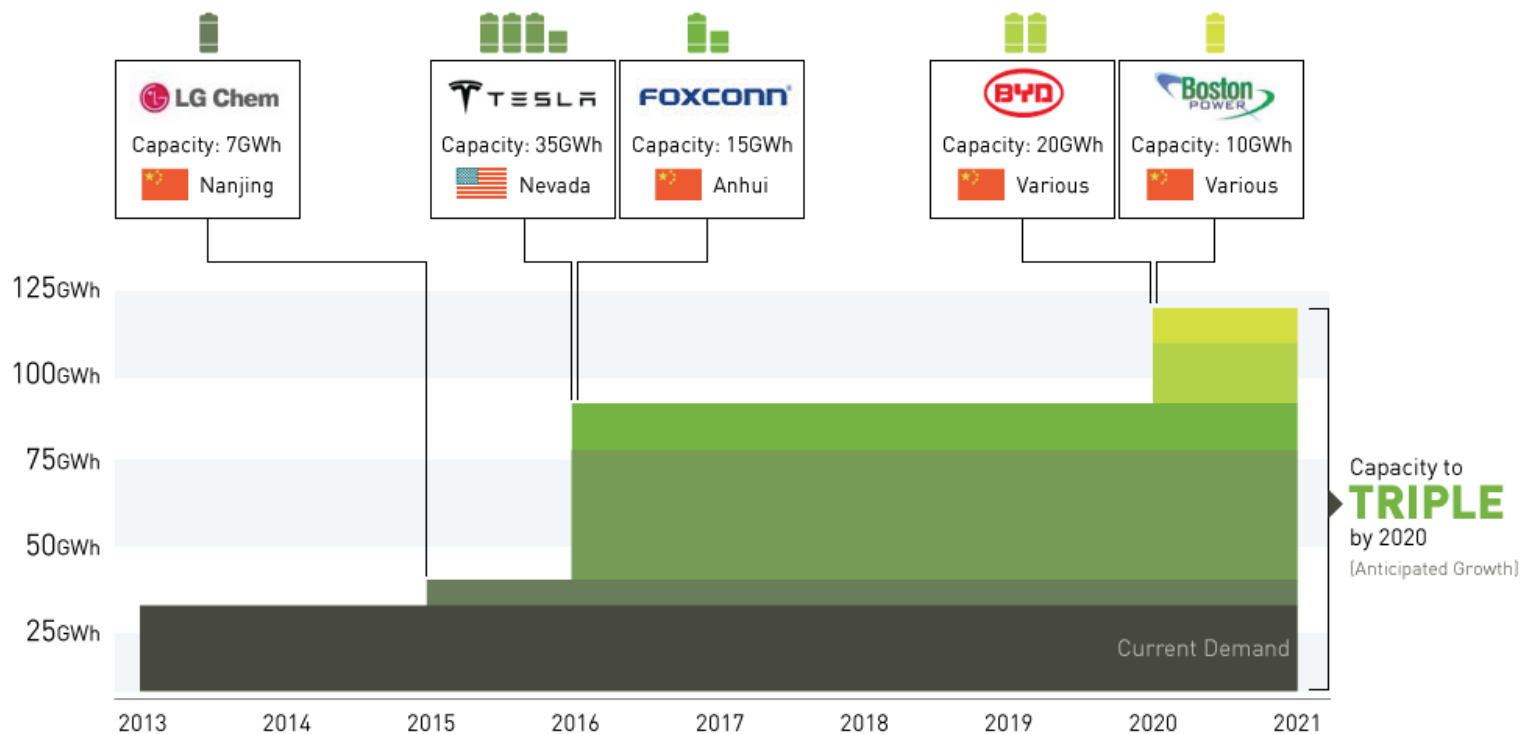




# *Lithium-Ion Batteries*

## THE LITHIUM-ION BATTERY MEGAFACTORIES ARE COMING

Production capacity of lithium-ion batteries is anticipated to more than triple by 2020

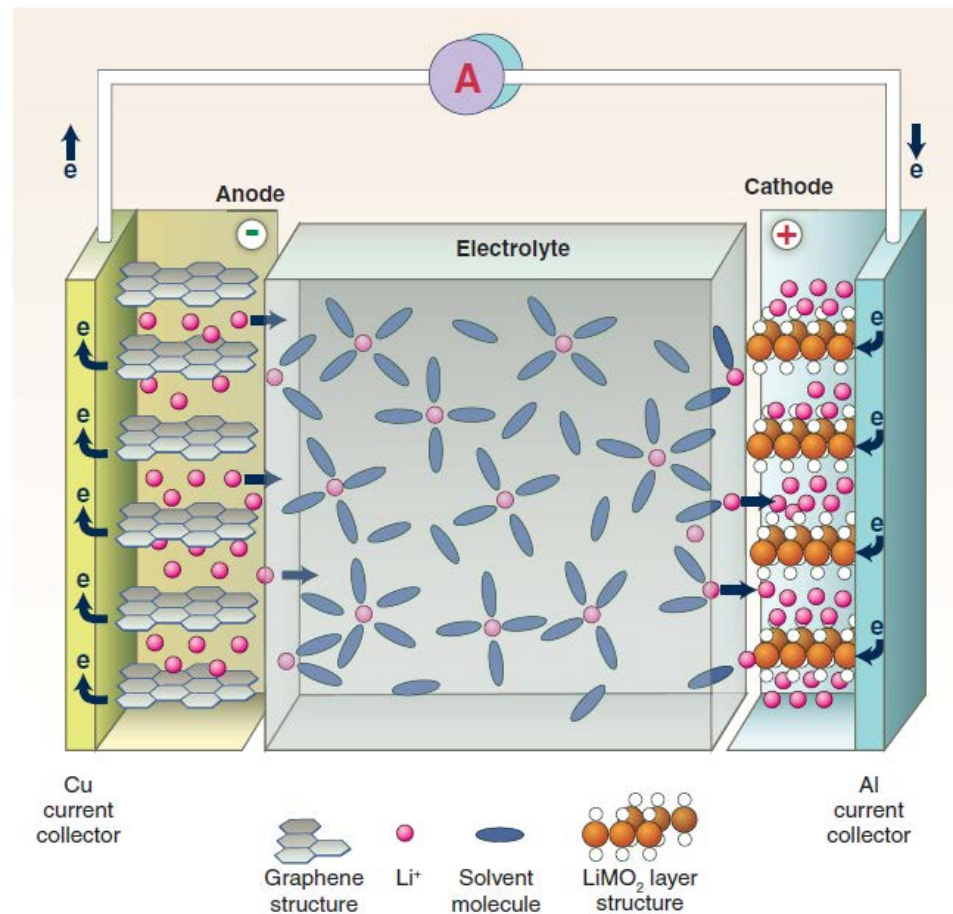


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# *Lithium-Ion Batteries*





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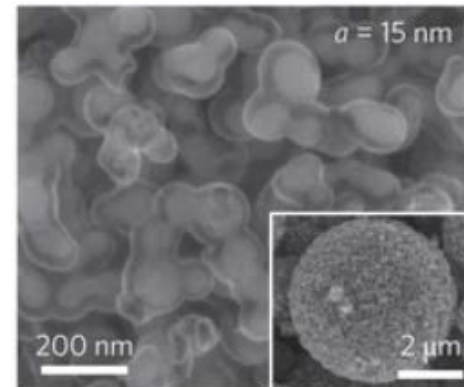


# *Nanoscience for Energy Storage: Success and Future Opportunities*



Yi Cui

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Stanford  
University



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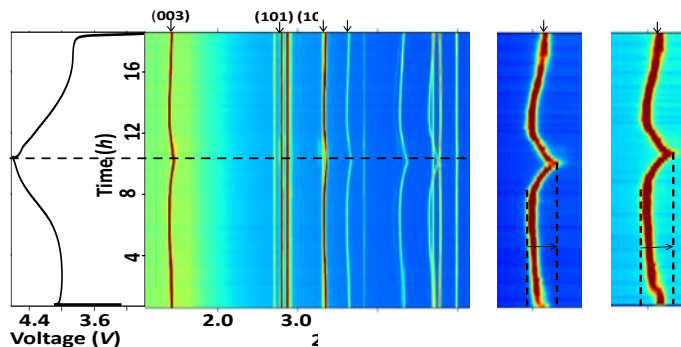
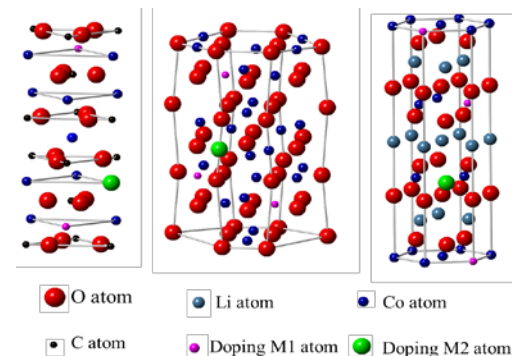


# *Advances of Lithium-ion Battery Technology in the 21st Century*



Yangxing Li

Chief Scientist  
Watt Laboratory  
Huawei Technologies  
Shenzhen, China





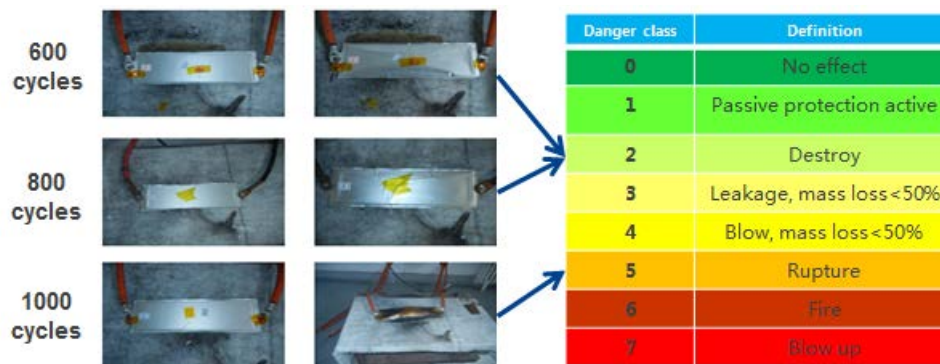
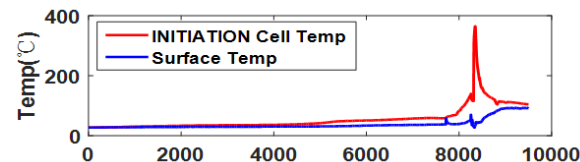
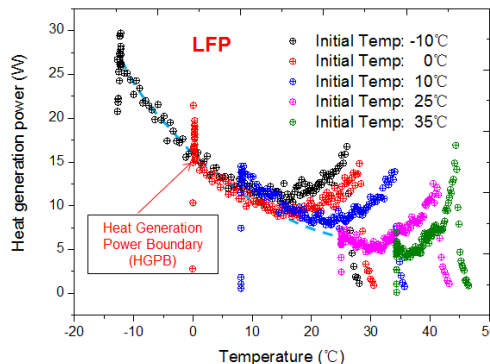


# *Thermal–Electrochemical Coupling Testing and Evaluation of Traction Batteries*



Fang Wang

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# *Life-Cycles of Lithium-ion Batteries: Understanding Impacts from Extraction to End-of-Life*



Gabrielle Gaustad

Associate Professor, Sustainability  
Golisano Institute for Sustainability  
Rochester Institute of Technology  
Rochester, New York, USA

Extraction → Deployment → End of Life

