

# The race is on to power the next generation of electric cars

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A major shift from gasoline-powered to affordable electric vehicles feels tantalizingly close, but the battery technology that could make it happen still needs to catch up to its own hype. Although luxury-car maker Tesla is banking on lithium-ion to power future generations of electric vehicles, others are taking a chance on promising new approaches, according an article in *Chemical & Engineering News* (C&EN), the weekly news magazine of the American Chemical Society.

Alex Scott, a senior editor at C&EN, notes that the all-new Tesla Model S, which can go an impressive 300 miles on one charge, already shows what a lithium-ion battery can do. The catch is that at \$80,000, the high-end model is out of reach for most customers. And its battery, which is stored under the floor of the car, is the size of a double mattress and weighs 1,500 pounds. Despite the avid pursuit of many different battery technologies, Tesla CEO Elon Musk told C&EN that lithium-ion remains the top option. The company is confident enough in it to plan on investing \$5 billion in a new battery plant that would build battery systems for half a million cars a year for Tesla and other car makers. That's more than the number of electric vehicles currently made each year worldwide.

But lithium-ion isn't the only player out there. Seeing the huge growth potential for [electric vehicles](#), chemical and technology companies are betting heavily on other types of batteries, including sodium-ion, lithium-metal, lithium-sulfur and lithium-air. Although some firms have tested the waters and withdrawn, many are staying in the race.

**More information:** Chemistry's Electric Opportunity,  
[cen.acs.org/articles/92/i28/Chemistry's-Electric-Opportunity.html](http://cen.acs.org/articles/92/i28/Chemistry's-Electric-Opportunity.html)

Provided by American Chemical Society

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