

10-16-2012

## Key Ingredient

Follow this and additional works at: [https://ecommons.udayton.edu/news\\_rls](https://ecommons.udayton.edu/news_rls)

---

### Recommended Citation

"Key Ingredient" (2012). *News Releases*. 574.  
[https://ecommons.udayton.edu/news\\_rls/574](https://ecommons.udayton.edu/news_rls/574)

This News Article is brought to you for free and open access by the Marketing and Communications at eCommons. It has been accepted for inclusion in News Releases by an authorized administrator of eCommons. For more information, please contact [frice1@udayton.edu](mailto:frice1@udayton.edu), [mschlengen1@udayton.edu](mailto:mschlengen1@udayton.edu).

# University of Dayton, Ohio (url: <http://www.udayton.edu/index.php>)



## Key Ingredient

10.16.2012 | Science, Research, Engineering

*National Geographic* featured the Research Institute's solid-state, rechargeable lithium-air battery in the article "Seven Ingredients for Better Electric Car Batteries."

Hailed as the first of its kind when discovered in 2009, the breakthrough addressed the fire and explosion risk of other lithium rechargeable batteries and paved the way for development of large-size lithium rechargeables for a number of industry applications, including hybrid and electric cars, the researchers said.

In traditional lithium batteries, all the chemicals that power the battery are stored inside. In a lithium-air battery, one of the chemicals – oxygen – is left out. Instead, the battery is specially designed to draw oxygen from the air around it. By extracting oxygen, rather than storing it, and by using lithium metal as an anode, lithium-air batteries are 10 to 15 times more energy dense than other lithium rechargeables.

"In the search for plentiful, cheap, safe, and light-weight battery ingredients, what could be more enticing than the idea of harnessing the very air we breathe?," *National Geographic* wrote in its feature.

Full development and commercial availability are years away, but *National Geographic* writes, "if it works, it could enable batteries with 10 times the capacity of today's lithium-ion batteries, cars that can travel up to 500 miles (800 kilometers), and cell phones that can handle a week of calls on a single charge."

For more information on the Research Institute's work on the solid-state, rechargeable lithium-air battery, please visit the related article.

**For more information, contact Pamela Gregg at 937-229-3268.**