

INTERNATIONAL JOURNAL OF SCIENCE EDUCATION

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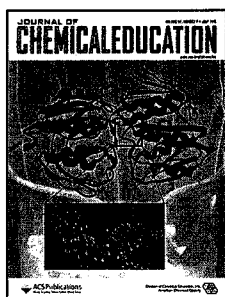
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ON THE COVER: In "Detection of the *cp4 epsps* Gene in Maize Line NK603 and Comparison of Related Protein Structures: An Advanced Undergraduate Experiment" (DOI: 10.1021/ed500655j), Nicole K. Swope, Patrick J. Fryfogle, and Tami L. Sivy describe a flexible, rigorous laboratory experiment for upper-level biochemistry undergraduates. In this experiment, DNA is extracted and purified from maize kernel and leaf samples collected from field samples of maize with a glyphosate-resistant transferase gene. Students detect the transgene of this genetically modified crop and assess the structural characteristics of the protein translated from the gene of interest using a combination of bioinformatics and computational-modeling techniques.

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DOI: 10.1021/ed500655j

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DOI: 10.1021/acs.jchemed.5b00057

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Exploring Carbon's Allotropy: A Pupil-Led Synthesis of Fullerenes from Graphite

Simon D. A. Davis, Simon D. Holland, Matthew S. A. Kingswell, Patrick M. Lavery, Martin J. Smith,* Christopher M. Thomas, James E. A. Tizzard, George T. West, Ashley D. Z. Zee, Alaa K. Abdul-Sada, and Jonathan P. Hare

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A Better Magnetic Stir Bar Retriever

Peter Marrs*

S Supporting Information available via online article

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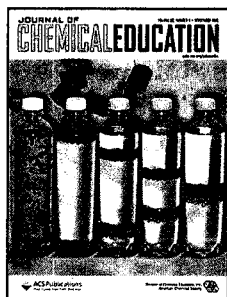
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ON THE COVER: In “The Dynamic Density Bottle: A Make-and-Take, Guided Inquiry Activity on Density” (DOI: 10.1021/ed500830w), Thomas S. Kuntzleman describes an activity in which students observe dynamic floating and sinking behavior of plastic pieces in various liquids. Explaining how these events take place is both motivating and thought provoking for students. This interesting system, which draws on a number of chemical concepts, can be constructed using inexpensive and easily obtained materials. The cover shows the time dependent floating and sinking behavior observed for low density polyethylene (blue pieces) and polystyrene (yellow pieces) in a thoroughly mixed isopropyl alcohol–salt water mixture (left to right: 1 s, 10 s, 20 s, 40 s, and 60 s after mixing).

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DOI: 10.1021/acs.jchemed.5b00637

What Might Cell Phone-Based Cheating on Tests Mean for Chemistry Education?

Kristen L. Murphy* and Thomas A. Holme

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John H. Shibata*

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Gabriela C. Weaver* and Hannah G. Sturtevant

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Impact of General Chemistry on Student Achievement and Progression to Subsequent Chemistry Courses: A Regression Discontinuity Analysis

Ginger V. Shultz*, Amy C. Gottfried, and Grace A. Winschel