Among the contrasts in scale between academic and industrial chemistry is the latter field’s use of raw materials by the trainload. This week’s special section, beginning on page 691, elaborates on the challenges and opportunities in industrial chemistry as the field embarks on its second century of development.

**Cover Illustration:** Yael Kats (photos: iStockphoto.com)
Researchers Grow New Teeth in Mice

Gorilla Virus in Our Midst

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Glucose Deprivation Contributes to the Development of KRAS Pathway Mutations in Tumor Cells

A chromatin remodeling complex targeted by Enzyme ALC1

Glucose deprivation can drive the acquisition of certain oncogenic mutations in human cancer cells.

Poly(ADP-ribose)–Dependent Regulation of DNA Repair by the Chromatin Remodeling Enzyme ALC1

A chromatin remodeling complex targeted by poly(ADP ribosyl)ation plays a role in DNA repair.

SCIENCENOW Highlights From Our Daily News Coverage

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Entropy Landscape of Phase Formation Associated with Quantum Criticality in Sr,Ru,O,

A. W. Rost et al.

The thermodynamic properties of strongly correlated electron systems can be probed near their quantum critical point.

Complete Methods Set for Scalable Ion Trap Quantum Information Processing

J. P. Home et al.

Coupling of different ions creates states that are insensitive to stray magnetic fields and more robust for quantum computing.

Risks of Climate Engineering

G. C. Hegerl and S. Solomon

Observations indicate that attempts to limit climate warming by reducing incoming shortwave radiation risk major precipitation changes.

Cellular Basis of Itch Sensation

Y.-G. Sun et al.

Itch, but not pain sensation, is abolished by selective ablation of a small subpopulation of spinal neurons.

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