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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.

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CAREERS A gorilla from Cameroon.

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Entropy Landscape of Phase Formation Associated with Quantum Criticality in Sr$_7$Ru$_2$O$_y$
A. W. Rost et al.
The thermodynamic properties of strongly correlated electron systems can be probed near their quantum critical point. 10.1126/science.1177077

Complete Methods Set for Scalable Ion Trap Quantum Information Processing
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Coupling of different ions creates states that are insensitive to stray magnetic fields and more robust for quantum computing. 10.1126/science.1177530

Risks of Climate Engineering
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Observations indicate that attempts to limit climate warming by reducing incoming shortwave radiation risk major precipitation changes. 10.1126/science.1178530

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. 10.1126/science.1174868

Gorilla Virus in Our Midst
A gorilla from Cameroon.

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