Benefits of selective feeding

Industrial processes using microbial cells allow the conversion of renewable-carbon feedstocks into a complex range of chemical products at comparatively low temperatures and pressures (1). In contrast, traditional chemical manufacturing relies mainly on energy-intensive conversions of petroleum-derived carbon feedstocks. However, record-low oil prices are making it difficult for biotechnology processes to compete with traditional manufacturing, particularly for low-cost bulk products such as biofuels and commodity chemicals. On page 583 of this issue, Shaw et al. (2), report a cost-effective technology to control contamination in nonsterilized process equipment (see the figure). This technology has the potential to greatly lower the cost of producing fermentation-derived chemicals with microbial processes.