

ChE letters to the editor

Dear Editor:

Bravo to Prausnitz (in the spirit of Aris) for casting our gaze in the direction of the humanities. Will chemical engineering produce its Charles Percy Snow, who caused a stir about three decades ago urging a "humanities...literature" culture bridge swing to a "science...technology" culture in his *The Two Cultures: A Second Look* through courses such as molecular biology. Prausnitz has delightful references to Bohr, Chagall, Haber, Silone, and others, but only a limited number of them. Can someone point out a textbook with others?

Sincerely,

Dale L. Schruben

Chemical Engineering Department
Texas A&M University, Kingsville

To the Editor:

We have produced a thermodynamics "slide show" at Iowa State University consisting of computer-generated images of fluid-phase equilibria with supporting text. The drawings show VLE situations for binary, ternary, and quaternary systems and combined VLE-LLE in a ternary. Pressure, temperature, and composition data in the sub-critical ranges are based on the Peng-Robinson equation using conventional mixing rules. Calculations were performed by the various flash routines within ASPEN PLUS. Critical points and curves were determined by the method of Heidemann and Khalil.

Open Inventor graphics software running on a Silicon Graphics workstation was used to generate the three-dimensional visualizations (binary PTx-y, ternary composition prisms, quaternary tetrahedrons). Bubble-point and dew-point curves and surfaces are distinguished using color and transparency, and static images are clearly labeled. Some of the drawings can also be zoomed, rotated, and sectioned to demonstrate phase-diagram geometries and show the importance of viewer orientation.

The Silicon Graphics "Showcase" utility was used to make the supporting text slides (approximately 45). The slide show was first given in November 1997 at the final examination of Kong Tian for the M.S. degree in chemical engineering. A Silicon Graphics "Presenter" was used for projecting the images onto a large screen.

We would like to offer the complete show at no cost to anyone having the Silicon Graphics equipment (and standard Showcase utility) needed to run it. The show provides

an interesting and effective way to alert students to the visualizability of thermodynamic information and to the fundamental hyperdimensionality of the data.

Those interested should contact Professor Jolls. Computer files can be retrieved via ftp and will include sufficient information to enable users to run them in the proper sequence. A videotaped version of the slide show will be available later this spring

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To The Editor:

I was interested, and indeed proud, to note that three of the articles in the winter '98 issue of *CEE* had a direct relationship to the Department of Chemical Engineering at the University of New Brunswick (UNB).

- Professor Arvind Varma (profiled as the ChE educator) graduated with a masters degree from the fledgling department in 1968.

- Dr. S. Farooq, my own former student at UNB (PhD, 1990), now a faculty member at the National University of Singapore, was author of an interesting article describing the development of an adsorption experiment for the undergraduate laboratory.

- Finally, Dr. Guido Bendrich, a UNB professor who obtained his PhD from McMaster University under Prof. Les Shemilt, the founding Head of the UNB department, presented an article describing a new communications course.

Not a bad record for a small department!

Sincerely,

Douglas M. Ruthven, Chair

Chemical Engineering Department
University of Maine