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# Editorial



## Where are we headed?

Chemical engineers are probably some of the most versatile people you will find throughout many different industries, such as petrochemicals, fine chemicals, pharmaceuticals, biotechnology, information technology, semiconductors, food and beverage, and even publishing. Although a majority of chemical engineers can still be found in traditional sectors, such as petrochemicals and chemicals, there is a growing number of people that are moving into areas outside of this scope.

The latest data from AIChE's Initial Placement of Chemical Engineering Graduates survey substantiate this claim. The study, conducted by AIChE's Career Services Dept., had a sample pool of 3,510 graduates. The results indicated that two fields — chemicals and fuels — still remain at the top of the list for employing chemical engineers. However, these two categories are experiencing gradual decreases in the number of chemical engineers joining their ranks. For instance, in 1991, 43.7% of the respondents said they went into the chemicals sector. Current data reflect that the number has dropped 20 points to 23.3%. Meanwhile, less traditional areas, such as biotechnology (including pharmaceuticals), are experiencing mild growth. In 1991, the figure for the biotechnology sector was 3.1%. Today, it has tripled to 9.3%.

The direction of the chemical engineering industry has been addressed at length, perhaps because the definition of chemical engineering is constantly evolving. AIChE president Calvin Cobb wrote a thought-provoking article, "Prepare for a Different Future," in *CEP* (Feb. 2001, pp. 69–74). Also, at a recent conference co-sponsored by AIChE, European Federation of Chemical Engineers and United Engineering Foundation, the topic of discussion was refocusing chemical engineering for the 21st century (Barga, Italy; May 27–June 1). Ed Cussler, professor of chemical engineering at the Univ. of Minnesota and past AIChE president, discussed the paradigms of chemical engineering. He viewed the first paradigm as unit operations, the second as transport phenomena, and the third as an undefined area that may include emphasis on process intensification, product engineering (as opposed to process), and new technologies, such as nanotechnology, biotechnology and information technology.

These are only a couple of opinions. We would like to ask you, our readers, to think about the future of chemical engineering. Help us to forge a new definition. Ask yourself these questions — Does the term chemical process industries (CPI), which is often associated with more traditional areas, offer an accurate description of where we work? Perhaps we are more appropriately defined as chemical engineering industries (CEI)? Or, as in Cussler's presentation in Italy, maybe we shouldn't be so focused on the process, but rather the product. Perhaps the CPI should be redefined as the chemical products industries? Or perhaps CPI is still a fitting term,

Let us know how you define the industry you work in, and we'll try to include them in our January 2002 cover story on "Redefining the CPI."

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