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Editorial



Chemical Engineering: Past, Present and Future

In November, I asked our readers “Where Are We Headed?” This was not exactly an easy question to answer. And unlike a mathematical equation, there is no one correct answer. Here’s a sampling of the feedback:

“I asked myself this as I was graduating with a PhD with a major in transport phenomena (TP). I, myself, was amazed at the numerous offers I got in non-traditional fields, such as applying TP in modeling nuclear waste transport, or to proposed Yucca mountain storage. In my opinion, the term chemical process industries (CPI) is outdated, and we, the most versatile engineers should come up with a term that is more broad-based.” *Ramani Reddy, Houston, TX*

“If the CPI are aiming to include all of chemical engineering, then I think a name change is a great idea. Chemical engineering industries (CEI) would certainly fit that goal. Chemical products industries (CPI) might as well, but it doesn’t have the same flexibility. My work is certainly product-focused, but I don’t know that this covers all areas of chemical engineering. The main question is, who should the name include?” *Danielle Hestermann, Marlborough, MA*

Danielle’s question is an excellent one. Do we still include those who have strayed very far away from the fold? Or should we only include those who have some type of relationship with chemical engineering? I think that as you read our special 32-page supplement (1S–32S), you’ll be able to develop your own opinion. Part of supplement profiles a dozen individuals who hold chemical engineering degrees. There is a good mix of people in traditional (e.g., petroleum) and non-traditional areas (e.g., electronics, law). Despite the different roads that these people took, one thing remains common — everyone agrees that a chemical engineering education was advantageous in that it taught him/her analytical and problem-solving skills that she/he could take anywhere in life.

The special section also takes a look at the roots of chemical engineering (2S–9S), as well as the future. The future outlook offered by Bechtel’s Freeman Self and retired consultant Ed Ekholm (22S–25S) shows that, although chemical engineers are diversifying into different areas (with biotechnology offering the most promise), these sectors still do “not yet have the capacity for rapid hiring growth and it is not clear whether they will have for years, since there are other disciplines that are competing for jobs.” This begs the question of — What do we need to do to give chemical engineers’ an edge? Part of the solution is to rethink the chemical engineer’s education. The Univ. of Minnesota’s Ed Cussler and his coauthors (26S–31S) offer some recommendations on how to do this; although they warn that this is not a one-size-fits-all solution: “We offer these suggested changes cautiously. We would be concerned if they became part of the training prescribed for every chemical engineer.”

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