

# ChemWorkforce Bibliography

American Chemical Society  
Office of Member Information  
[workforce@acs.org](mailto:workforce@acs.org)



## Selected Readings: Chemistry Ph.D.s

- ACS Presidential Task Force. 1996. "Are We Matching Ph.D. Supply and Demand?" *ChemTech*, January, pp. 8-15.
- Ausubel, Jesse H. 1996. "Malthus And Graduate Students: Checks on Burgeoning Ranks of Ph.D.'s." *The Scientist*, February 5.
- Barkume, Megan 1996-97. "The Job Market for Ph.D.'s: Two Views." *Occupational Outlook Quarterly/Winter 1996-97*, Winter, pp. 3-15.
- Bhagwati, Jagdish and Milind Rao 1996. "The False Alarm of 'Too Many Scientists'." *The American Enterprise*, pp. 71-72.
- Bloom, Floyd E. 1995. "Degrees of Uncertainty." *Science*, May 12, pp. 783.
- Burrelli, Joan S. 2003. "Graduate Enrollment Increases in Science and Engineering Fields, Especially in Engineering and Computer Sciences." *INFOBRIEF*, April, pp. 1-4.
- Butz, William P., Gabrielle A. Bloom, Mihal E. Gross, Terrence K. Kelley, Aaron Kofner, and Helga E. Rippen. 2003. "Is There a Shortage of Scientists and Engineers?" RAND.
- Caserio, Marjorie, Brian P. Coppola, Robert L. Lichter, Anne K. Bentley, Matthew D. Bowman, Andrew Neal Mangham, Kevin M. Metz, Samuel Pazicni, Margaret F. Phillips, and Jeffrey I. Seeman. 2004. "Responses to Changing Needs in U.S. Doctoral Education." *Journal of Chemical Education* 81:1698-1705.
- Clark, Mary Jo and John A. Centra. 1985. "Influences on the Career Accomplishments of Ph.D.'s." *Research in Higher Education* 23:256-269.
- Crosby, G.A. 1996. "Graduate Programs in Chemistry: A Time for Innovation and Reform." *Journal of Chemical Education*, October 10, pp. A235.
- Dillon, Sam. 2004. "US Slips in Attracting the World's Best Students." in *New York Times Online*. New York.
- Doering, Don S. 1995. "Degrees of Freedom." *Science*, August 18, pp. 903.
- Gose, Ben. 1997, "Community College in Virginia Attracts Ph.D.'s -- as Students", Retrieved July 10, 1997 (<http://www.chronicle.com/che-data/t-43.dir/issue-44.dir/44a03301.htm>).
- Greenberg, Daniel S. 1995. "Surplus in Science." in *Washington Post*. Washington DC.
- Griffiths, Phillip A. 1995. "Reshaping Graduate Education." *Issues in Science and Technology*, Summer, pp. 74-79.
- Hamilton, Kendra. "Is There a Doctorate in the House?" *Black Issues in Higher Education*, July 2004.
- Hartle, Terry W. and Fred J. Galloway 1996. "Too Many PhDs? Too Many MDs?" *CHANGE*,

- September/October, pp. 27-33.
- Heylin, Michael 2004. "The Changing Face of Chemistry." *Chemical and Engineering News*, February 16, pp. 104-108.
- Hill, Susan T. 2002. "Declines in U.S. Doctorate Awards in Physics and Engineering." *INFOBRIEF*, National Science Foundation, Arlington, VA.
- Hill, Susan T. 2004. "2004 Doctorate Awards Increase in Science and Engineering Fields for the Second Year in a Row." *INFOBRIEF*, National Science Foundation, Arlington, VA.  
<http://www.nsf.gov/statistics/infbrief/nsf06301/>
- Hill, Susan T, Thomas B. Hoffer, and Mary J. Golladay. 2004. "Plans for Postdoctoral Research Appointments Among Recent Doctorate Recipients." *INFOBRIEF*, National Science Foundation, Arlington, VA. <http://www.nsf.gov/statistics/infbrief/nsf04308/>
- Hoke, Franklin 1995. "Growth in Untenured Academic Science Jobs Seen Hurting Careers." *The Scientist*, September 18.
- Holden, Constance. 1995. "Is It Time to Begin Ph.D. Population Control?" Retrieved October 18, 1995 (<http://sci.aaas.org/nextwave/careers95/holden-population.html>).
- Johnson, Jean M. 1996. "Western Europe Leads the United States and Asia in Science and Engineering Ph.D. Degree Production", Retrieved January 2, 1997.
- Jones, Elka 2002-03. "Beyond Supply and Demand: Assessing the Ph.D. Job Market." *Occupational Outlook Quarterly*, Winter, pp. 22-33.
- Klemm, W.R. 2000. "Ph.D. Production: A Global Perspective", Retrieved January 24, 2000 (<http://www.the-scientist.library.upenn.edu/yr2000/jan/op>).
- Kuck, Valerie 2001. "Refuting the Leaky Pipeline Hypothesis." *Chemical and Engineering News*, November 19, pp. 71-73.
- Kurland, C.G. 1997. "Beating Scientists into Plowshares." *Science*, May 2, pp. 761-762.
- Lavallee, David K. 1997. "Doctoral Education in Chemistry - What's to be Done?" *Journal of Chemical Education*, February, pp. 147.
- Leatherman, Courtney 1995. "Survey Shows Continued Growth in Number of Science Ph.D.'s." *The Chronicle of Higher Education*, December 8, pp. A18.
- Levin, Sharon G. 2002. "Survey of Foreign Recipients of U.S. Ph.D.s." *Science*, March 22.
- Magner, Denise K. 1995. "Excess Production of Ph.D.'s Found in Engineering and Some Sciences." *The Chronicle of Higher Education*, June 30, pp. A16.
- Magner, Denise K. 2000. "Critics Urge Overhaul of Ph.D. Training, but Disagree Sharply on How to Do So." *The Chronicle of Higher Education*, April 28, pp. A19-A20.
- Mervis, Jeffrey 2001. "Can Universities be Bribed to Train More Scientists?" *Science*, December 21, pp. 2466-2467.
- National Science Board. 2004. *The Science and Engineering Workforce: Realizing America's Potential*. National Science Foundation, Arlington, VA.  
<http://www.nsf.gov/nsb/documents/2003/nsb0369/nsb0369.pdf>

- National Science Foundation. 2004. "Graduate Degrees." *Women, Minorities, and Persons with Disabilities in Science and Engineering*. National Science Foundation, Washington, DC.  
<http://www.nsf.gov/statistics/wmpd/graddeg.htm>
- Oliver, Julia D. and Emilda B. Rivers. 2005. "Graduate Students and Doctorates in Science and Engineering." National Science Foundation, Arlington, VA.
- Phillips, Michael M. 1996. "Math Ph.D.s Add to Anti-Foreigner Wave." Pp. A2 in *The Wall Street Journal*. New York.
- Raber, Linda Ross 1995. "Chemists Give Mixed Review of NRC Report on Doctoral Education." *Chemical and Engineering News*, May 29, pp. 44-63.
- Regets, Mark 1997. "What's Happening in the Labor Market for Recent Science and Engineering Ph.D. Recipients?" *Issue Brief*, September 23, pp. 1-4.
- Sanderson, Allen and Bernard Dugoni 2002. "Interstate Migration Patterns of Recent Science and Engineering Doctorate Recipients." *INFOBRIEF*, February, pp. 1-8.
- Schultz, William G. and Victoria Gilman 2005. "US Visa Policies: A Mixed Picture." *Chemical and Engineering News*, April 11.
- Science. 1995. "Careers '95: The Future of the Ph.D." *Science*, October 6, pp. 121-146.
- Shneour, Elie A. 1995. "Of Semantics and the Scientist Population: Are There Too Many of Us?" *The Scientist*, September 18, pp. 12.
- Smith, Steven J., Liane Pedersen-Gallegos, and Catherine Riegler-Crumb. 2002. "The Training, Careers, and Work of Ph.D. Physical Scientists: Not Simply Academic." *American Journal of Physics* 70:1081-1092.
- Spiegler, Marc 1997. "Big Brains No Gains." *American Demographics*, January, pp. 43-45.
- Syverson, Peter D. 2002. "Data Sources: Bullish on Master's Degrees." *Communicator*, January/February, pp. 4-6.
- Teitelbaum, Michael S. 2002, "The U.S. Science and Engineering Workforce: An Unconventional Portrait", Retrieved September 29, 2003 (<http://www.phds.org/reading/guir2002/teitelbaum.php>).
- Teitelbaum, Michael S. 2003. "Do We Need More Scientists?" *Public Interest*, 153: 40-53.  
<http://www.thepublicinterest.com/archives/2003fall/article2.html>.
- Tobias, Sheila. 1995. "Restructuring Supply, Restructuring Demand." *Change*:22 - 25.
- Tsapogas, John. 2004. "Info Brief: Employment Outcomes of Recent Science and Engineering Graduates Vary by Field of Degree and Sector of Employment." National Science Foundation, Arlington, VA.
- Tsapogas, John. 2004. "Info Brief: The Role of Community Colleges in the Education of Recent Science and Engineering Graduates." National Science Foundation, Arlington, VA.
- Wasserman, Ed 1997. "Graduate Education and Industry Needs." *Chemtech*, August, pp. 19-21.
- Webster, David S. and Tad Skinner 1996. "Rating PhD Programs: What the NRC Report Says and Doesn't Say." *Change* May/June, pp. 22-44.
- Wilkinson, Keith. 1997, "Number of Doctoral Scientists and Engineers Grows by 6 percent between 1993 and

1995", Retrieved October 21, 1997 (<http://www.nsf.gov:80/sbe/srs/databrf/sdb97305.htm>).

Yemma, John. 1997, "Job Market Does Number on PhDs in Math, Science", Retrieved March 17, 1997 (<http://www.boston.com/globe/economy/cg.i?%2Fglobe%2Fbgc%2F07%2Fmet%2F004>).