

NDEW 2013 — OXIDE

April 15, 2013

National Diversity Equity Workshop 2013

Rigoberto Hernandez



www.oxide.gatech.edu — **NDEW 2013 — OXIDE**

Georgia Tech
Chemistry & Biochemistry



Diversity Equity



What is Diversity?



Inclusion of the “*other*” :

- Gender
- Race & Ethnicity
- Disabilities
- LGBTQIQ
- Socioeconomic
- Culture
- Life experiences
- Ideas
- Geography
- University Pedigrees
- Political Ideology
- Place of Origin (International)
- etc.



Competitiveness



Numbers

- In 2010 female faculty comprised:
 - 16.4% in Top 10
 - 16.6% in Top 25
 - 16.9% in Top 50
 - 16.5% in Top 75
- In Top 75 Male:Female ratios for 2010 are:
 - 324:114 - Assistant
 - 289:86 - Associate
 - 1238:162 - Full



SCIENCE & TECHNOLOGY

WOMEN ARE 17% OF CHEMISTRY FACULTY

After a year's pause, **GRADUAL GROWTH** in the percentage of female chemistry professors resumes

SOPHIE L. ROYNER, C&EN WASHINGTON

WOMEN STILL hold surprisingly few chemistry professorships, although they are slowly gaining ground: The gradual expansion in women's share of chemistry faculty positions resumed in the 2010-11 academic year after pausing the year before. At the 50 universities that spent the most on chemical research, women held 17% of the tenured and tenure-track positions in 2010-11, up from 16% in the previous two years, according to revised C&EN figures.

The weak economy may be impeding faster progress. Budget cuts resulting from the Great Recession and other financial strains have prevented many willing chemistry departments from recruiting new female professors or, for that matter, any new professors at all. And some chemistry departments tell C&EN they have been trying their damndest to recruit female faculty but have lost promising candidates to schools with more resources.

When considering faculty positions for which a chemistry department paid at least half the salary, women held 10% or less of those positions at just four of the top 50 schools. They included the University of Chicago, Emory University, and the University of Southern California. Johns Hopkins University had just one woman out of a total of 20 chemistry professors, giving it the lowest proportion of women among the schools. The brevity of the 10%-and-under list marked quite an improvement over 2009-10, when seven schools were in this category.

The University of Puerto Rico, Rio Piedras, had the highest percentage of women in 2010-11. There, women held almost one-third of the faculty positions. Purdue University came in a close second, with 28% women. (If the pool of schools is expanded to the top 75, Colorado State University was the only other school with that high a percentage of female chemistry faculty.)

In absolute numbers, Purdue had the most women in its chemistry department, with 15 female faculty, followed by the University of California, Los Angeles, with 12. C&EN has been counting women on chemistry faculties every year since 2000. For each of those years, the survey covered the schools that spent the most on chemical R&D, based on the most recent National Science Foundation ranking available in a given year. Usually, C&EN limited the survey to the top 50 schools.

Arguably, these selection criteria have some flaws. For example, NSF's ranking makes no distinction between schools that have chemistry-only departments and those with departments that combine chemistry with another subject, such as biochemistry. Also, selecting a certain number of schools to profile excludes plenty of schools with good news to report. For instance, at school number 79—Brown University—three of the last five tenure-track hires were women, notes chemis-

try department chair Matthew B. Zimmt. For this year's story, C&EN partnered with the Open Chemistry Collaborative in Diversity Equity (OXIDE) to collect data on the schools that topped NSF's list for 2008, the most recent year available since the survey began. Data on the top 75 schools appear in the tables in this story; data on additional schools are available on the OXIDE website (oxide.gatech.edu).

The OXIDE initiative is also gathering data on other aspects of diversity, including citizenship, race, and ethnicity. OXIDE's objective is to try to establish diversity equity within the leading research-active chemistry departments, explains Director Rigoberto Hernandez. Hernandez, who is a chemistry professor at Georgia Institute of Technology, has served on a number of policy-making boards with the American Chemical Society (which publishes C&EN), Georgia Tech, and the National Academies to try to help achieve diversity equity.

"IN ANY GIVEN YEAR, schools typically hire only one or two individuals, so change is going to be incremental from year to year," Hernandez concedes. Still, several of the schools that OXIDE looked at have hired at least one woman in the past year. He notes that "the percentages at the moment are generally between 10 and 20%, with a few happy exceptions that are above that." NSF data indicate that approximately 39% of chemistry graduate students in 2009 were women, Hernandez says. So he expects that women's share of faculty positions could eventually approach or exceed that level "if the pathways to go from Ph.D. to assistant professor are equitable." OXIDE plans to "do detailed, longitudinal assessments of whether those pathways are in fact equitable," he adds.

"We're hoping to change the infrastructure from the top down, so that the

& MORE ONLINE View an updated and expanded table of data for the 2009-10 academic year at cenm.ag/women.

SLOW, STEADY GROWTH

Now, 17% of chemistry professors at top universities are women

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Assistant	18%	20%	21%	21%	20%	21%	21%	22%	24%	26%	27%
Associate	21	20	20	20	19	21	22	22	22	22	22
Full	6	7	7	7	8	8	9	10	11	12	13
All ranks	10%	11%	12%	12%	12%	13%	14%	15%	16%	16%	17%

NOTE: Tenured and tenure-track women chemistry faculty at the 50 schools identified by the National Science Foundation as having spent the most on chemistry research. SOURCES: C&EN and OXIDE surveys

Numbers

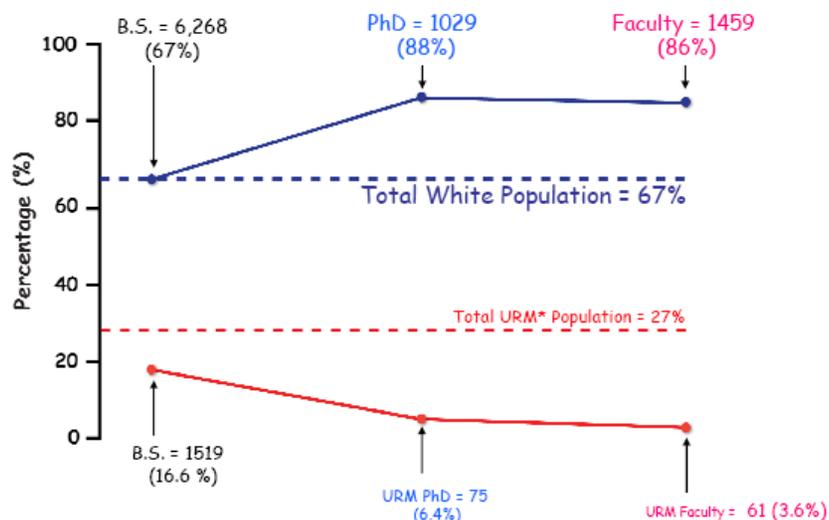
2010 Numbers (chemistry)‡:

- 2306 PhDs
- 37.4% Female
- 57.4% (1323) U.S. Citizen or PR
 - 0.4% Native American
 - 10.9% Asian
 - 4.1% African American
 - 4.8% Hispanic
 - 76.1% White

‡Advancing Graduate Education in the Chemical Sciences (2012)

- In the 2010 Census:
 - 16.4% Hispanic or Latino
 - 12.6% African American
 - 4.8% Asian American
 - .9% Native American
 - .2% Pacific Islander

FROM B.S. TO FACULTY: THE PIPELINE FOR U.S. CITIZEN ETHNIC GROUP REPRESENTATION IN CHEMISTRY in 2003



* Underrepresented Minorities

* From: "Workshop on Excellence Empowered by a Diverse Academic Workforce: Achieving Racial & Ethnic Equity in Chemistry" (DOE/NSF/NIH Report)

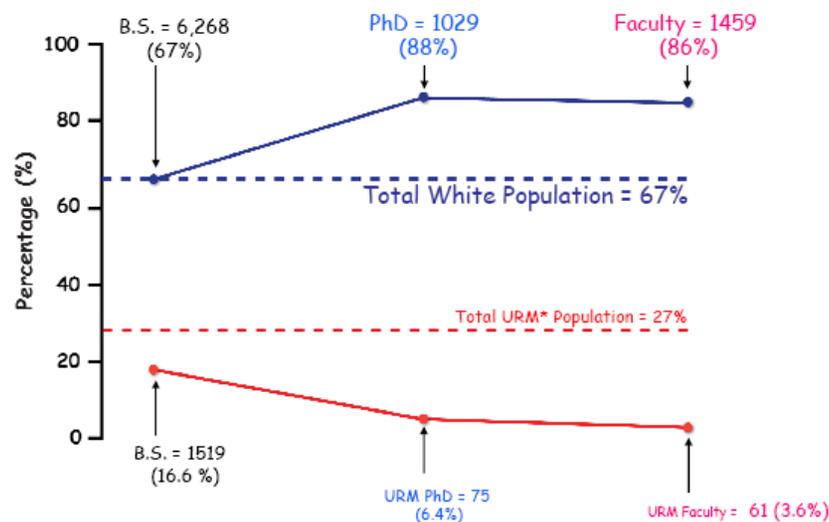
URM Data on Faculty in Chemistry coming this year!



Numbers

- Let's do the numbers:
 - 6,268 BS / 1,029 PhD
⇒ 1 Ph.D. : 6.1 B.S.
 - (1,029 PhD / year) / (1,459 Profs / 25 years)
⇒ 1 Prof : 17.6 Ph.D.
⇒ 1 Prof : 107.4 B.S.
- Faculty in the top 50 are rare events.
- The best chemists have options with better odds.

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Professors are the intellectual 1%!



Excellence



Implicit Bias

Can you believe what you see?



Do you see
one or two
colors in
the swirling
stripes?

(Blue or
green?)

Adapted from B. Nosek, U.Va.

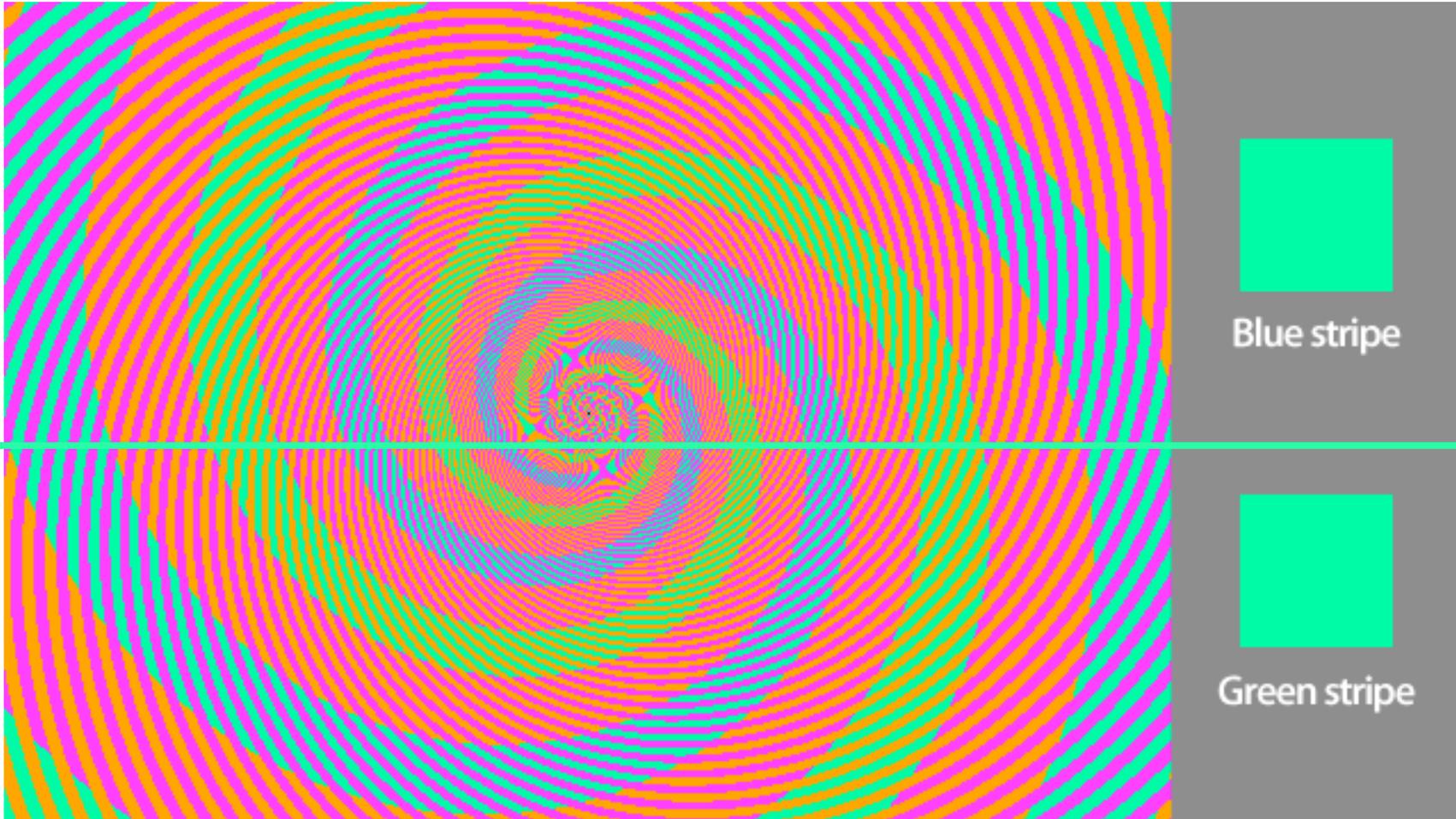
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R. Hernandez
@ Georgia Tech



Implicit Bias

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Implicit Bias

Can you pick the winner?



A

B

Adapted from F Smyth, U.Va.

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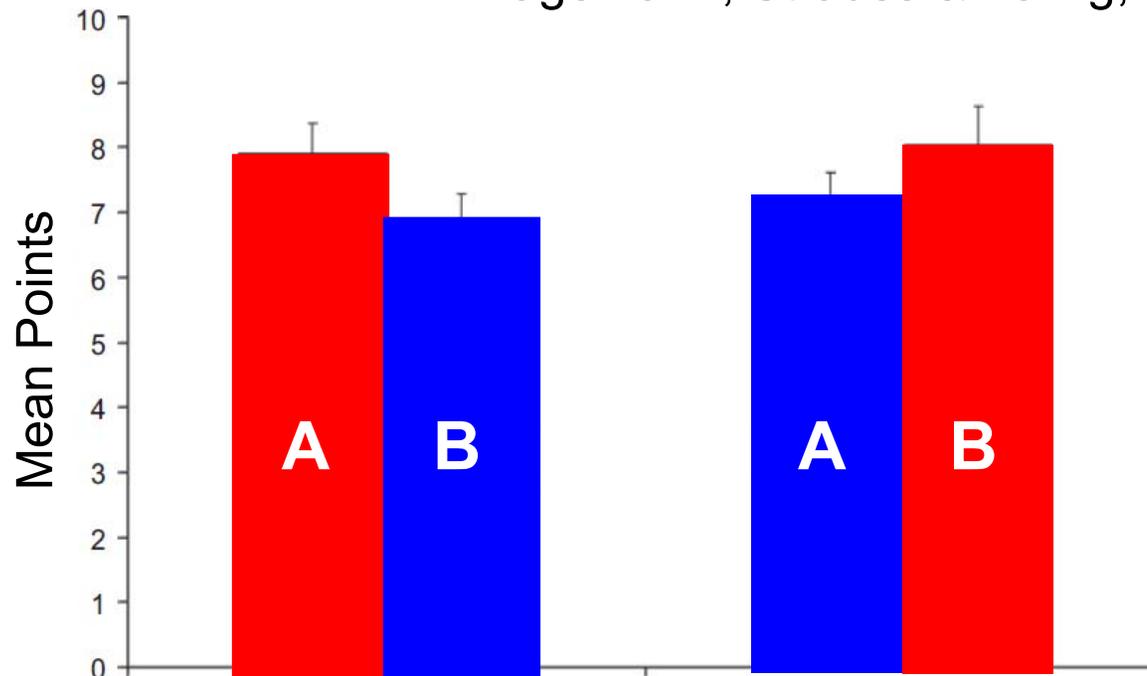


Implicit Bias

Can you pick the winner?

Competitor A wins...IF he's wearing red

Hagemann, Strauss & Leinig, 2008



Adapted from F Smyth, U.Va.



Diversity Equity is Timely



Gender in the News



LETTER TO THE EDITOR

Letter from alumna receives national attention

By Anne-Marie Slaughter and Susan Patton

As alumnae, we were surprised to see our former Princeton colleague, Susan Patton '77, make it to the national headlines over the weekend in response to a letter she wrote to the Princeton University Board of Trustees on Friday. The letter, which was published in Princeton's student newspaper, the *Daily Princetonian*, on Friday, was a response to a letter from the Princeton University Board of Trustees on Friday. The letter, which was published in Princeton's student newspaper, the *Daily Princetonian*, on Friday, was a response to a letter from the Princeton University Board of Trustees on Friday.

Interclub Council releases survey about eating club admissions

The Interclub Council has released a survey about eating club admissions. The survey, which was conducted by the Interclub Council, found that 23% of respondents believe that women should be allowed to join eating clubs. The survey also found that 77% of respondents believe that men should be allowed to join eating clubs.

“Here’s what nobody is telling you: Find a husband on campus before you graduate.”

— Susan Patton '77

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Letter to the Editor

When people asked why I had left government, I explained that I'd come home not only because of Princeton's rules (after two years of leave, you lose your tenure), but also because of my desire to be with my family and my conclusion that juggling high-level government work with the needs of two teenage boys was not possible. I did not exactly leave the ranks of full-time career women: I teach a full course load; write regular print and online columns on foreign policy; give 40 to 50 speeches a year; appear regularly on TV and radio; and am working on a new academic book.

But I routinely get reactions from other women my age or older that ranged from disappointed (“It’s such a pity that you had to leave Washington”) to condescending (“I wouldn’t generalize from your experience. I’ve never had to compromise, and my kids turned out great!”).



WHY WOMEN STILL CAN'T HAVE IT ALL

By Anne-Marie Slaughter

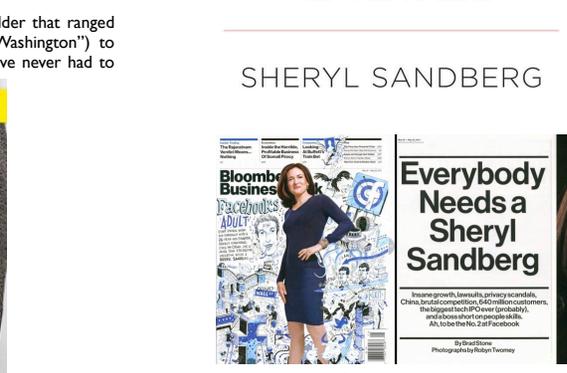
The Atlantic magazine cover features a young child in a stroller. The headline reads 'THE IDEAS ISSUE: 23% BIG IDEAS' and 'WHY WOMEN STILL CAN'T HAVE IT ALL'.



LEAN IN

WOMEN, WORK, AND THE WILL TO LEAD

SHERYL SANDBERG



LEAN IN TODAY

“Progress for women in the leadership ranks of every industry has been largely stagnant for the past decade. We can and must do better. The question we all have to ask ourselves is: How?”

—Sheryl Sandberg



Join the Lean In community at leanin.org

Lean In is a place to encourage women to lean in to their careers and to change the conversation from what we can do to what we can be. It's a place to find support and inspiration.



LEAN IN TODAY

“Progress for women in the leadership ranks of every industry has been largely stagnant for the past decade. We can and must do better. The question we all have to ask ourselves is: How?”

—Sheryl Sandberg



R. Hernandez @ Georgia Tech

LGBTQIQ in the News

Lesbian
Gay
Bisexual
Transgender
Queer
Intersexed
Questioning



Alan Turing & UK Apology



Carolyn Bertozzi



Comment - 23 minutes ago - i and 2 others like this.

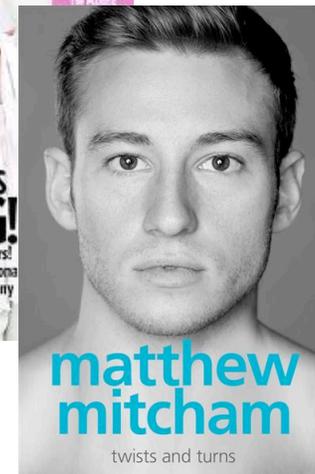


Let's paint Facebook and the U.S. red with

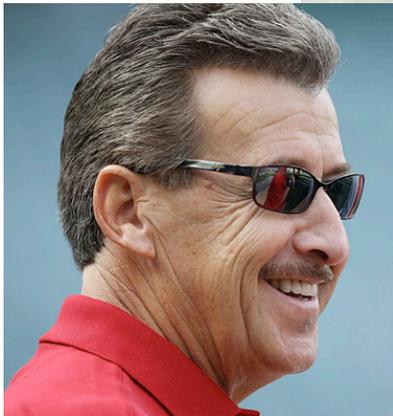


Lynsey Addario, New York Times, March 29 2013

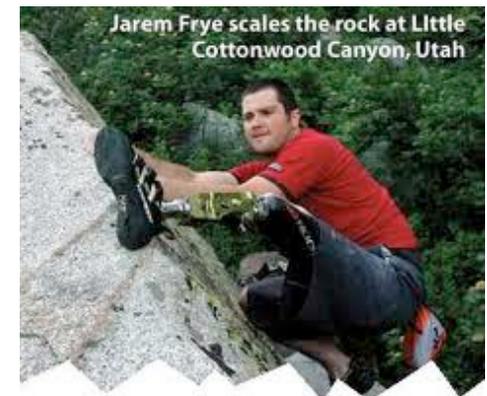
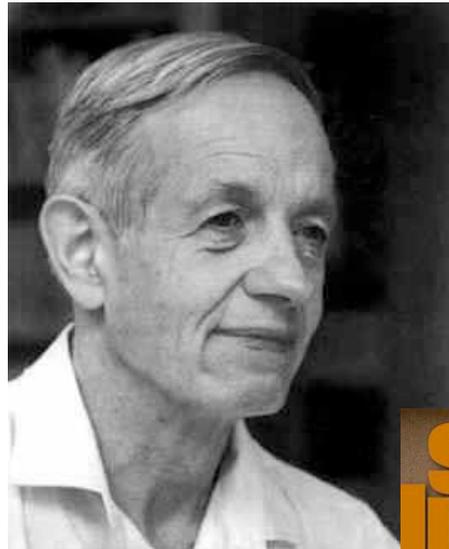
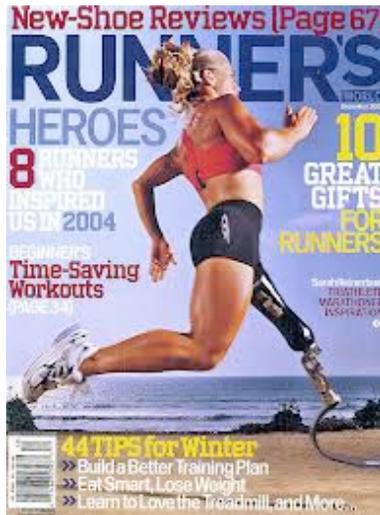
Robbie Rogers,
Pro Soccer Player



URMs in the News



Disabilities in the News

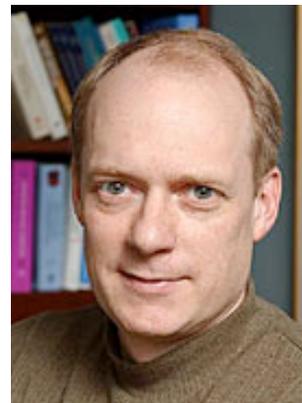


You build it and they
Diversity is a planned event
will come



Who We Are

- ❖ 2011: OXIDE = Open Chemistry Collaborative in Diversity Equity



- ❖ September 2012: funded jointly for five years by NSF, NIH, DoE
- ❖ Demographics of academic chemistry faculty do not correspond to the demographics of the U.S. population
- ❖ Vision: **flattening diversity inequities by placing the responsibility (to solve the problem) on institutions, not on single agents**



Enacting the Vision

- ❖ Change academic chemistry infrastructure from the top down
- ❖ Excellence-Driven (Diversity is Key to the Post-Modern Meritocracy)
- ❖ Partner with research-active chemistry department chairs
 - ❖ Responsibility and credit
- ❖ Reduce inequitable policies and practices
 - ❖ Historically led to disproportionate representation
- ❖ Collaborate with social scientists
- ❖ Diversity writ large
 - ❖ e.g., gender, race-ethnicity, disabilities, and sexual orientation
- ❖ Disseminate broadly



What We Do

- ❖ Host biennial National Diversity Equity Workshops (NDEWs)
 - ❖ 2011, 2013, 2015, 2017
- ❖ Conduct and publish annual demographic census of research-active doctoral Chemistry departments
- ❖ Disseminate relevant findings from STEM & the social sciences
 - ❖ OXIDE portal (beta version)
 - ❖ NDEWs and NDEW reports
 - ❖ To come: other mechanisms...
- ❖ Connect department chairs, social scientists, existing diversity communities
- ❖ Assess the impact of department policies, programs, and changes
- ❖ Assess our programming and dissemination products



OXIDE Advisory Board

❖ Currently 12 members: 4 social scientists, 8 chemists



NDEW 2013



NDEW 2013 Highlights

- Breakouts!
- Focus session #1: Organizational structure, behavior & dynamics
- Focus session #2: Recruitment, hiring, retention and promotion
- Focus session #3: Lesbian, Gay, Bisexual, Transgender, Queer, Intersex and Questioning (LGBTQIQ) equity
- Focus session #4: Creating an inclusive culture
- Sample department diversity presentation & discussion



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