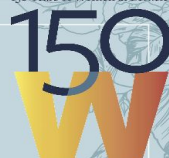


150 Years of Women at Berkeley



# *History of Women in Chemistry and Biochemistry*



**Berkeley**  
UNIVERSITY OF CALIFORNIA

Lizy Choi and Flora Fan

# 150 Years of Women at Berkeley

October 3, 2020



“Resolved, That young ladies be admitted into the University on equal terms in all respects with young men”

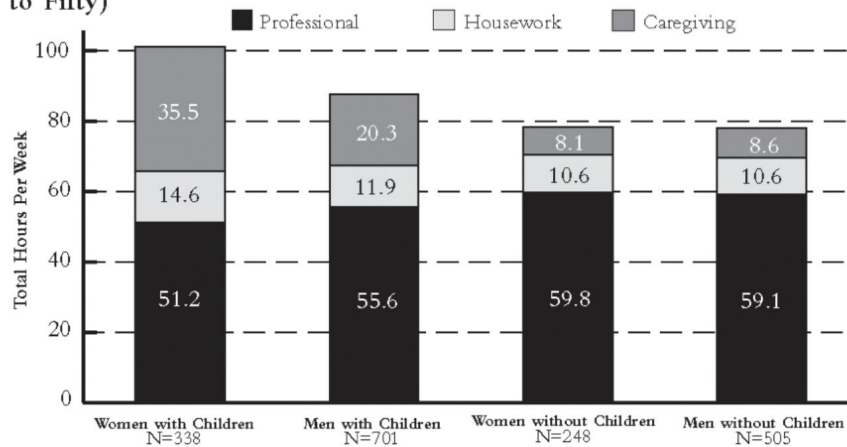
- UC Regent Samuel F. Butterworth

## Exploring the past 40 years to now

In 1978 **Prof. Judith P. Klinman** was appointed as the first female faculty member in all of physical sciences and engineering at UC Berkeley



Everyone Is Very Busy (University of California Faculty, Ages Thirty to Fifty)



Mary Ann Mason, Angelica Stacy, and Marc Goulden. "The UC Faculty Work and Family Survey", 2003; <http://ucfamilyedge.berkeley.edu>

# *Faculty Experiences*

~ 40 years ago



*Angelica  
Stacy*

Professor of Chemistry (1983-)

Associate Vice Provost for the Faculty (2001)

## ***Angelica Stacy***

**Associate Vice Provost for the Faculty  
(2001)**

**Professor of Chemistry (1983-)**

### **Why Berkeley?**

AS: Its reputation: it seemed like the best place to be a faculty member. As a faculty in between inorganic and physical chemistry, I did solid state chemistry or material chemistry, which weren't developed as much when I first came, so I taught inorganic and general chemistry. I think it was great that Berkeley nurtured a lot of the scientists who became pioneers of modern chemistry.

### **What challenges if any have you experienced by being a woman studying in Chemistry?**

I think it has been slow in increasing the number of women in Chemistry and in Physical sciences in general. Because I was in a field that wasn't so well-represented at the time, there were always these questions about whether [material science] was chemistry or not. There weren't many accommodating programs on managing children when I had three children. I didn't know what I was going to do because there weren't clear things in place like now. Fortunately, I had a couple of senior male colleagues who supported me by taking over the courses for me. But it was all uncertain: I had no idea how this was going to play out. It was still uncommon at that time. In my very first class that I taught, I was waiting for the students to come in and heard them whisper "I heard this was a new professor I wonder how he's like."

### **What does Berkeley do well in terms of gender equality in your experience in the College of Chemistry?**

AS: We have absolutely improved over the past decade. When I first started teaching in Berkeley, there were very few women. Now, the entire Berkeley faculty is about 33% women,

This was also true in the classes. What's interesting now is more than 50% of the students are women, including chemistry classes. As an Associate Vice Provost for the Faculty, I oversee faculty equity and welfare and the recruitments. So we have made a really concerted effort across the campus to make sure that we put processes in place that are systematic that look carefully at all the candidates, because what tends to happen is that there is a tendency for the candidates to utilize their network and connections as oppose to really looking broadly and thinking carefully about the candidates who applied.

### **What do you think can be improved on?**

AS: While I said there are 33% women in Berkeley faculty overall, we are still not seeing the drastic change in the chemistry faculty. It hasn't changed as fast. If you look around, we don't see a lot of female professors. I think there still is an implicit association where people do not address the qualifications of women as much as their personality and manners. Although it's not intentional, people still must look beyond the first instinct on how the administration evaluates other people. Well, just looking at the number of women on faculty, I don't think we are doing a good job. There is a record of an old study where a lot of women who received PhD in Berkeley have been successful in other universities. Now there is a real effort among the graduate students to think about the climate, equity and inclusion, and environment. It's changing but it's amazing that I'm saying that it's changing in 2020.

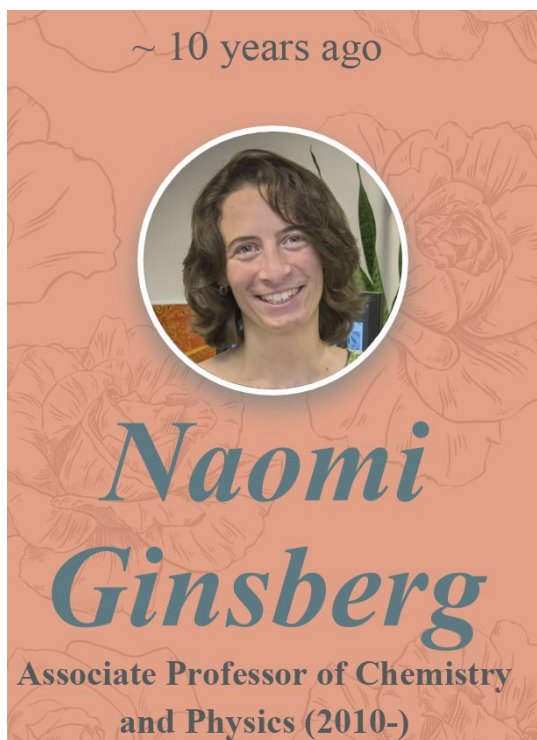
### **Have you ever encountered indiscretions?**

AS: I had some struggles and some of that had to do with not having a great mentoring system. I always felt like there was a network among the male faculty and the new male faculty were getting more information and advice than I might have been getting. And there were a number of times where I, or my research group, got blamed for something that we didn't do. Just those kinds of situations felt unjust.

### **Do you think you had an adequate support system?**

AS: I would say my greatest support came from my graduate students and my husband. I was especially touched by my graduate students who were willing to join a research group led by a young women professor. One specific to Berkeley was when Karl Pister and Doris Calloway, one of the first female Provost of the university, reached out. Another incident that happened to me was that the University wanted to take my lab space, even when I was doing very well. There, I felt like I was really targeted. The University did not suggest a good solution and this issue went all the way up to Carol Christ, current Chancellor, who was Provost at the time. She had a conversation with the Dean and the Chair and offered a great solution.





## ***Naomi Ginsberg***

**Associate Professor of Chemistry and Physics (2010-)**

### **Why Berkeley?**

NG: Physical chemistry at Berkeley is world-renowned, there are great graduate students and my colleagues are leaders in their fields. The lab facilities are great and there is a lot of collaboration between the faculty. I'm very grateful to be teaching at a public institution, where the mandate is to teach the people of California and have an impact on society at large. I grew up in Canada, where there is a cultural belief in a social safety net and in equity and inclusion. I was a GSI at the private institution where I received my PhD, and to me teaching at Berkeley is closer to the sense of community I felt when I was doing my undergraduate at a large public university in Canada.

### **How was your experience when you first started teaching?**

NG: I was here doing my postdoc at LBNL before I started teaching in Fall 2010. There were around 10(?) female faculty members already here in the Department of Chemistry, and I'm very thankful that Berkeley had developed a lot of trailblazing policies. I'm in both the Chemistry and Physics departments, and the cultures are quite different, women are more of a minority but there are definitely grassroots efforts going on to change that. I have been 'patted on the head' before by other faculty, people are sometimes not very mindful of different experiences, but this doesn't take up too much of my thinking. The impressive progress made at the administrative level definitely trickles down into the departmental level.

### **Have you ever faced any discrimination or indiscretions against you as a female faculty member?**

NG: Sometimes when it comes to teaching evaluations I have received comments from students that, while I understand may have been trying to be complimentary, didn't come off quite right. I also found out a while back that I was not being paid equitably at all; after I brought this to the attention of the department, it was remedied by a campus initiative. It was a terrible feeling to feel undervalued, and it is still debatable to just wait until pay becomes an issue. There is the prevailing view - and I've been told myself - that one needs to show up with a counteroffer if we want to discuss our pay, and we need to eliminate this advice. As a woman or underrepresented

person in academia as well, there is the idea of ‘paying the diversity tax’, in which sometimes women are more frequently asked to participate in conferences and especially committees to ensure there are a diversity of participants. This can put pressure on us to participate beyond what is manageable and I believe that it is a right to also say ‘no’.

**Do you believe your pursuit of science may have limited your choices of family formation?**

NG: No, I don’t have a family by choice, and it would be the same even if I did not go into STEM. Although I will say that this choice does put me in the minority.

**What do you think Berkeley does well, and what could be improved on in terms of gender equality in the College of Chemistry?**

NG: There has been a lot of progress made to achieve equity, there are a number of female deans and other administrative officials, and professional development workshops for women under a university-wide initiative I had the privilege to participate in. There is a stoppage of the tenure clock for faculty who are parents irrespective of gender, and birth parents are given two semesters off of teaching. I think an overall initiative to develop emotional intelligence in faculty is an idea moving forward. I’m passionate about learning so I love my job here, it’s extremely rewarding.

# Graduate Experiences



## ***Sue Miller***

**Graduate student in the Klinman Group (1978-83)**

### **Why Berkeley?**

SM: It was the top institution for graduate research in chemistry. I came to Berkeley the summer before my program and worked in the Rapoport lab - I met my husband there, actually - before joining Judith's group.

### **How was your graduate experience?**

SM: I thought it was great. My colleagues were very supportive; they helped me with my practice orals and I didn't feel marginalized at all. There wasn't any negative attitude towards women in my experience. Around thirty percent of the graduating class were

women.

### **How does your graduate experience compare to your undergraduate?**

SM: There weren't a lot of women in my undergraduate classes but my professors did encourage me to pursue further study.

### **Where did you go after your PhD?**

SM: After Berkeley I joined a group at Michigan Ann Arbor studying redox reactions. There were already two strong women in the faculty and it was a great environment. My husband went into pharmaceuticals and I into research. Enzymology was a big thing in industry and I interviewed at a diagnostic company, but I had a five year old daughter at the time and could not accept a travelling job. Obviously I wanted a more stable job and went into academia.

### **What challenges, if any, have you experienced as a woman in your career?**

SM: I think overall I've had a pretty great experience and am lucky that there were women who were already paving the way forward. I was the first female in the Department of Pharmaceutical Chemistry at UCSF and there was an instance that really demonstrated to me a lack of understanding around a woman with a young child. I needed a specific equipment part for half a day, it was one that was shared amongst the faculty so it was always in use. And I remember when I went to ask the supervisor if I could borrow it for the half a day that I needed, he offered me the option to come in at night to use it. This was only one case and I don't want to blow it up, I still remember it just because I thought it was rather insensitive at the time.

**What do you think about gender equality today in academia?**

SM: Oh definitely it is a lot more equal now, women are invited to attend Gordon conferences, men are taking on more childcare responsibilities. You know, there's always more steps we can take but we're moving in a good direction.



***Priscilla Pieters***

**Graduate student in the Alivisatos Group (2018-)**

**What challenges, if any, have you experienced by being a woman studying chemistry? Were there any specific to Cal?**

PP: One of the toughest aspects about being the minority in an environment is that it is difficult to receive recognition equal to the quality of the material. I guess I had to learn to develop confidence in order to better express the research material to my group. Parallel to that, I had to learn to be taken seriously during presentations in order to better convey my professionalism and to be taken seriously by other group members. Moreover, the gender ratio in my lab is about 3 to 1 male to female and as a woman, I guess it's easier to decide not to join.

**What does Berkeley do well in terms of gender equality in your experience in College of Chemistry? What do you think could be improved on?**

PP: I thought that the administration's efforts to minimize gender discrimination was evident with multiple programs like Childcare on Campus for students with families and the Women in



Chemistry Initiative. However, usually the PIs have the most control over the culture within the group. For some groups, it may not be as welcoming as other groups. While the administration tries to accompany everyone without discrimination, it's difficult when a PI's culture dominates the atmosphere within the research group.

**Are you optimistic about the future in the context of equity?**

PP: I am optimistic about the future. I mean I think you can observe the changing gender ratio over the years just by looking at the undergraduates attending Berkeley right now. Maybe the part we can focus on is women after their PhD: most of them do not continue their academics.

**Do you think you had a supportive community environment ?**

PP: I think Berkeley introduces great programs like the Women in Chemistry Initiative that holds its meetings monthly. But most of the time you need to reach out to people and try to create new relationships. They don't just come to you. I met my close friends in Berkeley by taking courses in my first year. I guess it was easier to bond with people who have similar interests or fields of research.

# Historical Records from the Bancroft Library

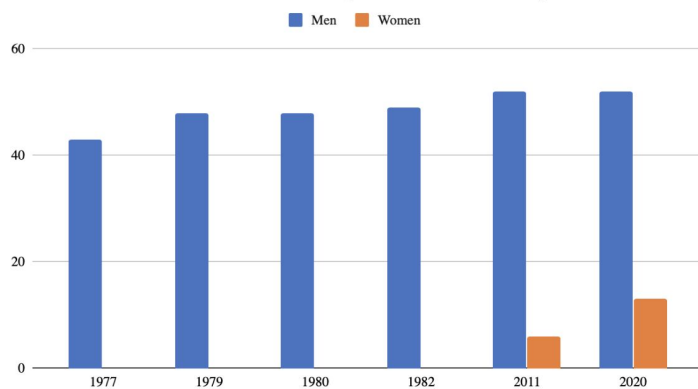
## Undergraduates majoring in Chemistry 1977/1978

	Men	Women	% Women
Fall 1977	172	72	29.5%
Spring 1978	142	55	27.9%

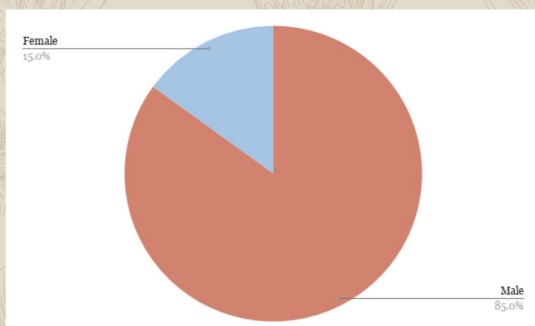
## Department of Chemistry 1974-78

	Men	Women	% Women
Department	150	23	13.3%
Professors	40	0	0%
Associate Professors	6	0	0%
Assistant Professors	7	0	0%
Associates	4	3	42.9%
Lecturers	3	1	25%
Teaching Associates/Fellows	90	19	17.4%

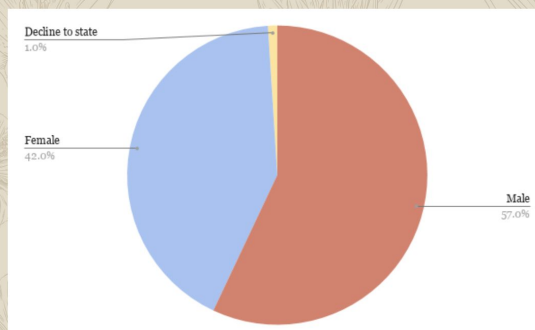
Number of Professors in the Department of Chemistry 1977-2020



### *College of Chemistry student population ~40 years ago*



### *College of Chemistry student population today*





*With special thanks to Professor Klinman for her  
guidance and support!*

## *Sources*

- ♦ 150 Years of Women at Berkeley website
- ♦ UC Berkeley College of Chemistry website
- ♦ The Bancroft Library
- ♦ Presentation template by [SlidesCarnival](#)