

# The Window of Opportunity



Nancy E. Levinger



Photo Credit: William A. Cotton, Colorado State University Photography

As a beginning graduate student, well before I met the man I would eventually marry, I recall considering my future. I was training to become a scientist, but would I find a partner? Would my career path allow me to have a family? Although these basic personal choices had always seemed inevitable to me as a child, in the frenetic schedule of a chemical physics graduate student, they were anything but given. At that point, studies had yet to appear showing the impact of advanced education on women's personal lives [1]. Still, it seemed clear; the likelihood of finding a partner while spending almost all my waking hours working on science was probably pretty small.

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After many musings, I made an active decision: the rich career afforded by my advanced degree would fulfill me whether I married or not or had a family. This decision played a role in my success as a graduate student. It allowed me to focus my energy on science and leave my personal life to chance. I thrived in graduate school, both academically and personally. About two years later, I met Pete, the man who would become my best friend, my husband, the father of my children, and the person who made it possible for me to succeed in my career as a professor and as a mother.

So what does success look like for Prof. Mother? What kinds of obstacles existed for me as a graduate student in the 1980s, an assistant professor in the 1990s, and now as a full professor [2, 3]? What extra challenges arose because of my personal choice to raise a family? Although I cannot claim to have universal answers to these questions, I believe that my life provides insight into some things that make it possible for women to thrive simultaneously as academicians and mothers and some of the significant issues that still remain. The individual path for each woman will vary, but some well-considered choices can increase the chances of reaching satisfaction in both career and personal life.

## Early Career Decisions

I believe that the decision most critical to successfully balancing career and family rests on the choice of partner. An academic career places tremendous demand on individuals regardless of their personal choices. A supportive partner understands career demands. Children place tremendous demands on parents. A supportive partner understands and happily steps up to share the demands that come with raising children.

When Pete and I decided to marry, we discussed whether we wanted to have a family. Both of us hoped that our union would include kids. Our wedding vows included a line “I take you...to be the mother/father of my children” (which overjoyed my own father who until that point was not sure we wanted to have our own children).

When we would actually fit this into our research-full lives remained a mystery. Finishing my PhD and moving on to a very demanding postdoctoral fellowship, I wondered if we would find a way to start a family. Already in my thirties, we knew that risks associated with pregnancy would only increase and that our energy to keep up with kids would wane as we grew older.

When my search for an academic job loomed in the summer of 1991, Pete and I decided that we had a window of opportunity. We would stop using birth control for four months from June to September; if I became pregnant, we would have a baby in between my postdoc and professor jobs. If not, we would wait. Three months passed without a positive pregnancy test, but in September 1991, the last month in our window of opportunity, I became pregnant. We were elated and nervous. This meant that my academic job search would include balancing preparation and, hopefully, interviews while pregnant.

In 1991, just being a woman seeking a faculty position at a research-intensive institution placed me in a small minority. Adding pregnancy to that mix was not something I wanted to broadcast. So, except for a very small number of close friends and family, I worked to hide my pregnancy. I applied to jobs posted at 21 different institutions and was thrilled to receive invitations for several interviews. During January 1992, which was also the beginning of the second trimester of my pregnancy, I was interviewed at three different institutions. Though I had already gained weight, I believed that the pregnancy was not yet really showing. However, that did not deter a potential colleague at one of the interviews from stopping dinner conversation to ask me (in front of four other potential colleagues), “So, Nancy, it looks like you have gained some weight since we last met. Do you want to tell us why?” I was mortified and answered, “No.” Years later the professors present at that fateful dinner told me that they knew I was pregnant and it did not matter. Whether it mattered or not, we’ll never know. Nonetheless, I feared that confirming the pregnancy might jeopardize my possibility to receive an offer from that institution or anywhere else. When I finally revealed my pregnancy to my postdoctoral advisor, he was shocked but supportive.

In the end, I was thrilled to receive an offer to join the faculty at Colorado State University. I might have received other offers, but, having grown up in Fort Collins, CO, and with my parents and sibling still living there, the opportunity was a dream come true.

Incidentally after my interview, my soon-to-be Colorado State University colleagues also speculated that I was pregnant, a fact I did not confirm until I had accepted the job offered to me. Much later in my career, I learned that at least one of my colleagues openly questioned hiring a pregnant woman and made disparaging comments about my ability to succeed in the job suggesting that a pregnant woman could not possibly be serious about science. Lucky for me, I never knew of his views until after he retired and I had reached the rank of professor.

My first child, Ian, was born early in July 1992. Six weeks later, I started as a brand new assistant professor of chemistry at Colorado State University. Four years and two miscarriages later, my second son, Eric, was born in late July 1996. Both births and all pregnancies occurred prior to my earning tenure.

In 1995, Colorado State University began considering options for probationary faculty to extend the tenure clock for personal reasons such as childbirth. With a newly passed policy [4], I may have been the first faculty member at CSU to extend the tenure clock on the basis of childbirth. Exercising the option to delay my tenure decision helped to reduce my stress and gave me time to fill gaps in my academic vita. But the extra year of uncertainty about my ability to meet the expectations and earn tenure also added to personal stress. Through three pregnancies (two miscarriages and one viable), I had spent ~15 months pregnant, and the balancing act of work, managing exhaustion during pregnancy, and caring for infants left my curriculum vitae with obvious gaps. From frank discussions with more senior colleagues, I know that some questioned my productivity (or lack thereof) during the time of pregnancy and infant care. Although data suggest that extending the tenure clock can lead to salary inequities [5], the data also show positive impact on

promotions. Evidence now also suggests that stopping the tenure clock can be more advantageous for men than women and can negatively affect women's ability to achieve tenure [6]. I continue to be grateful for the opportunity to postpone the tenure decision, an opportunity that is now nearly universal at academic institutions for women and men alike.

Not knowing the pressures presented by the simultaneous start of my independent academic career and family was probably good for me. Had I understood the challenges that both would place on me, I might never have chosen to have children. As it was, Pete and I managed. With the help of two spectacular nannies, I learned to balance demands of a career at a research-intensive university with the needs of infants, toddlers, and young children (Fig. 1). Initially, my husband worked in Boulder then in Denver, more than one-hour' drive away. So child emergencies were entirely my dominion. And there were plenty of them—the nanny calling in sick at 7 am when I had to teach my class at 9 am (Grandma to the rescue!), the fall that 4-month-old Ian took yielding a goose-egg-sized lump on his forehead and a skull X-ray (he was fine), and more. A few months before Eric was born, my husband achieved his career goal of gaining employment at the Hewlett-Packard site in Fort Collins. Trading his hour plus commute by car with a 10 minute by car, or 25 minute by bicycle, commute drastically improved our quality of life. He was much less tired and so much happier, which made him more able to support my frenetic schedule (Fig. 2).

## Academic Success

When I entered graduate school after college, I was pretty sure that I wanted to pursue an academic career. The balance of research and teaching seemed like something I would really enjoy. My experiences as a teaching assistant assured me

**Fig. 1** Nancy with her sons Eric (left) and Ian (right) on sabbatical in 2000



**Fig. 2** Nancy's sons Ian (left) and Eric (right) in 2017



that I liked teaching; research, although demanding, was also stimulating and exciting. Shortly before earning the PhD, I discussed careers with my graduate advisor. When I expressed interest in an academic career, he probed me, asking what kind of academic job I felt would be best. At that point, I could not imagine what kind of research I could do at a primarily undergraduate institution, so I aimed for a position at a research-oriented university. In hindsight, this seems like a rather random way to pursue this demanding career. However, I feel that my career fits my talents and interests well; in hindsight, I would not change my choice.

During my postdoc, Dr. Tom Blackburn, then an ACS Petroleum Research Fund (PRF) program officer, led a workshop that provided critical guidance and gave me confidence that I could succeed in as a professor at a research-intensive university. Tom, assisted by University of Minnesota Prof. Larry Miller, led a group of chemistry postdocs and graduate students through a short exercise in which we came up with ideas for research proposals. Even though I had garnered a prestigious National Science Foundation (NSF) Postdoctoral Fellowship, I doubted my ability to generate fundable research ideas. This short exercise at a critical juncture in my life demonstrated to me that I had lots of fundable ideas. The confidence boost was enough to encourage me to apply for faculty jobs at research-intensive institutions. You might expect that gaining this confidence would be enough to allay my self-doubt from then on, but lack of confidence continues to follow me throughout my career. Despite many career accolades and successes, I still suffer from the imposter syndrome [7], feeling as if I have less talent than I actually have.

As an assistant professor, I applied broadly to granting agencies for funding. My applications yielded early fruit, netting funding from ACS PRF and then a prestigious NSF Young Investigator Award. I also teamed up with colleagues to write two instrumentation proposals, both of which received funding.

Although money came rather easily, papers were much more challenging. When my first full paper was rejected for publication, I did not know what to do. I had never experienced this as a graduate student or postdoc. Those results remain

unpublished to this day because I did not realize that I could simply revise and resubmit the paper.

Earning tenure and promotion was probably the most gratifying result to a most terrifying process of my life. The period immediate before the tenure decision was particularly stressful for my family. As a young, assistant professor and parent, I was told by the chair of our promotion and tenure committee, "Nancy, your priorities are messed up. You need to place research way above everything else, significantly above your familial obligations and way above teaching and service." I responded that family and research could be equal, but I could not place research above my familial obligations. I hope that no junior faculty member of mine will receive the same advice. Still, I got the message and worked around the clock to meet my colleagues' expectations.

As the tenure decision neared, I believed that I needed to "spread the gospel of Nancy" so that potential tenure letter writers would know my work. I solicited and received many invitations to give seminars about my work at other institutions. In 1998, I visited 18 different institutions presenting talks at each, far too much travel for my family. Several multiday trips to speak at neighboring institutions kept me away from home for days. On one such trip, my younger son got sick and my husband spent most of the night up with him. To this day my husband reminds me of that night. Thus were born the "mama rules": (1) professional trips were limited to five consecutive nights away from home; (2) each professional trip required me to be home two weeks before the next could begin. After earning tenure, I attempted to honor these rules. As the children grew up, the rules relaxed to a certain degree. However, when possible, I still attempt to follow these rules as they demonstrate my commitment to family needs.

Five years after my promotion to associate professor, I requested a promotion to full professor and began preparing supporting materials. Then, the chair of the department's standing committee on promotion and tenure (SCPT) summoned me to meet with him. He told me that the committee had met and there was some sentiment that I ought to postpone the decision. Suspecting that one member of the committee opposed my promotion, I asked the SCPT chair if this meant I had to postpone the promotion. When he answered "No", I told him that I would go forward with the promotion. After all, what was the worst that could happen? That fall, the department voted unanimously in favor of my promotion. About a month later, I encountered the person on the SCPT whom I believe wanted to block my promotion. He greeted me with congratulations; more than a month had passed since the department vote, so his congratulations confused me. It was only when he mentioned how positive and effusive the external letters had described my contributions that I realized the congratulations were for my promotion.

Now, 25 years after embarking on this journey, I am proud of my accomplishments. Beyond my promotions, I have also earned several accolades at Colorado State University including being named one of 12 University Distinguished Teaching Scholars, one of two highest university honors bestowed on faculty. I have been elected to leadership positions in the American Physical Society (APS), American Chemical Society (ACS), American Association for the Advancement of Science

(AAAS), and as chair of a Gordon Research Conference. I earned fellowship in APS, ACS, and AAAS.

I try to use my own standing in these societies to further the careers of deserving colleagues, especially other women. One of the most gratifying honors came early in 2015. My former undergraduate researcher Dr. Kyle Kung, the first undergraduate to work in my lab, contacted me to tell me that he wanted to endow a scholarship in my name. Working together, we designed a fund that supports undergraduate students in research, which is a passion of mine. Sometimes I feel awkward to have the Nancy E. Levinger Undergraduate Research Fellowship named for me. But it is wonderful to be the source of funding for these talented students, to know that my role in Kyle's life translates into opportunity for them and to get to meet them!

Recognizing the challenges that I have faced, I work to connect with junior faculty as a mentor. I have served as a formal mentor that my department assigns to junior colleagues. In addition, I have volunteered as a mentor for junior faculty through the College of Natural Sciences Women in Natural Sciences (WINS) group. WINS pairs senior women faculty as mentors for junior women faculty across college departments. Thus, I have mentored junior colleagues from different departments. More often I end up in mentoring relationships because I notice the need. Through mentoring, I hope to help others avoid the mistakes I made.

## **Role Models, Encouragement, and Discouragement**

Without doubt, my father had the most significant influence on my early scientific interest and success. I remember the excitement and fascination I had when my third grade class had a unit studying astronomy. Realizing my interest, my father, a mathematician, encouraged me to explore much further than my third grade class. He pulled a book of star maps from the shelf, and he and I poured over them to figure out what we could see in the dark night sky. Together we marveled at science in the first episodes of NOVA that began airing on public television around 1973. I was particularly enamored by the episode entitled "The First Signs of Washoe", reporting about a chimpanzee that learned sign language.

By the time I started junior high school, I sought and received the opportunity to take science instead of the required home economics course. I also participated in a program entitled, SCIP (Science Careers Investigation Program) that took girls and underrepresented minority students out of school for field trips to encounter science firsthand. My favorite class in the ninth grade was honors biology, from which I still remember a lot of information. In high school, I greatly enjoyed and excelled in my math and science classes. When it came time to apply to college, I knew I would pursue a science career.

Over my years in college, graduate school, and postdoctoral research, many people mentored me. My late CSU colleague, Branka Ladanyi, gave me my first opportunity to try research in the summer following my sophomore year in college. Although the Monte Carlo simulations I worked on that summer did not yield the

results we hoped, Branka included me as a co-author on a paper she published, which undoubtedly impacted my applications to graduate school. Returning to college, I approached Rick Van Dwyne who graciously offered me the opportunity to explore research in his lab. Though not very involved in my day-to-day activities, my graduate advisor Carl Lineberger's door was always open for discussion about science and careers. My postdoc advisor, the late Paul Barbara, also supported my career. Each of these official advisors provided a wonderful foundation for me, but I also found it useful to find a mentor who was not vested in my success, someone who could give me advice but for whom the advice had no impact on their own careers. Early in my career, Mark Ratner amply filled this role for me. As an undergraduate student, a graduate student, a postdoc, and then as a faculty member, I knew that I could always contact Mark for sage, unbiased advice.

As society started to accept women's abilities, most women of my generation, born toward the end of the "baby boom", did not encounter the enormous overt barriers to pursuing science that earlier generations faced [2, 8]. Even though I had wonderful academic mentors throughout my career, I did not initially have any female role models. In retrospect, I realize that role models existed but I did not connect with them. My rejection of female role models puzzles me now but fits a well-documented pattern. Raised in the same society, women are just as likely as men to demonstrate implicit bias toward women in male-dominated fields and roles [2, 9–11].

By now in 2017, overt gender discrimination is much less common than it was in previous generations, but sadly it is not completely gone. As an assistant professor, I received a prestigious NSF Young Investigator Award (the predecessor to NSF CAREER). A male colleague of mine, two years ahead of me on the tenure track, had applied for the same award but did not receive it. Rather than congratulate me, he told me that I had only received the award because I was a woman. Needless to say, his comment fed my insecurity making me doubt whether I really deserved the award. Although this overt sexism should not exist, 20 years later, a young female colleague of mine suffered the same response from our young male colleague when she received a prestigious award.

Unfortunately, implicit gender bias is still alive and well [11]. We all have biases. We use many of them automatically to make the decisions we constantly face in life [12]. The problem arises when bias limits our ability to pursue or achieve our goals. My challenge now is to recognize barriers when they arise. This may sound odd—we should recognize a barrier in the way of our progress. But often the discrimination can be difficult to identify. This is particularly true for the standards to which women are held compared to men [13, 14].

In my current position, I continue to work for gender equity. In the past few years, I have helped to initiate exploration in to gender bias at Colorado State University. Meeting regularly around my kitchen table informally with a group of full professor women faculty, many of whom have held administrative positions (e.g., department chair, associate dean), we precipitated a listening event with the university president, provost, and vice provost for faculty affairs (all men). This event led to an in-depth faculty salary survey that revealed significant salary gaps for women full professors



and to the creation of the Standing Committee on the Status of Women Faculty (SCSWF) [15]. Recently, the SCSWF released results from an extensive campus survey about the climate for women on campus [16]. Although the survey's methods revealed significant problems on our campus, it also provides recommendations to mitigate those problems. I feel proud that the safe, intimate setting of my home set in motion changes that will improve the climate for women at CSU and beyond. I am also indebted to my own family—all male—for supporting this group of strong women when we met over the course of nearly a year to set this ball rolling.

## Impact of Career on Family and Family on Career

We usually think of family influencing career, but career can also influence family. Sometimes it is hard to figure out which way the arrow points, family  $\rightarrow$  career or family  $\leftarrow$  career? Surely those temporary issues like dealing with a sick child or being on time to pick kids up from day care fall under the category of family impacting career. Attending meetings, conferences, workshops, etc. in distant places or deadlines for work obligations fall under the category of career impacting family. But most of the time, a basic chemistry concept, that of thermodynamic equilibrium, describes the interaction precisely. We seek balance in equilibrium, *Family*  $\rightleftharpoons$  *Career*.

So how have I found this elusive equilibrium? For the first 8 years of our children's lives, my husband and I chose to hire a full-time nanny, the most expensive, but also the most convenient, childcare. Initially, my husband's entire take-home pay barely covered the nanny's salary and the mortgage payments for our house, but it was worth every penny that we spent. We were blessed to have two exceptional nannies, Randi and Donna, for all but 4 months of those 8 years; in between these two, we had another nanny who did not work well with us. Our nannies did not live with us. They arrived at our home at around 7 am and stayed until 6 pm. They did so much more than tend to the children—all the laundry, much of the shopping, some food preparation—in addition to providing an attention-rich and loving environment for the boys. When both children were in school full time, we hired a series of wonderful after-school babysitters who picked the kids up from school and cared for them until we got home. Each had her own style and the kids loved them all. We continue to maintain contact with both our wonderful nannies and most of the after-school sitters for years after they stopped working for us. Our attention to our nannies' needs made it possible for them to stay with us for years. Indeed, we have continued to help both of them in times of need and they have returned the favors for us. Most of the weddings our kids have attended were of their former babysitters!

One way that my career has influenced our children is through their exposure to and reliance on lots of people other than their parents. Ian developed lasting ties to Randi, who cared for him from age 6 weeks to more than 4 years. Eric developed significant ties to Donna, who began caring for the children when he was 8 months

old and only stopped caring for them when we left for my first sabbatical leave, a few weeks before Eric's fourth birthday. Both nannies worked as a team with my husband and me. They echoed our values; they read to our sons, engaged in enriching activities like swimming lessons, horseback riding lessons, visits to parks and playgrounds, regular visits to the public library for books galore, and so much more. Part of who my sons are today comes from their strong relationships with these wonderful nannies and after-school sitters.

When the children were young, I never felt as though I was doing enough, not as a faculty member, not as a mother. I remember telling this to a friend when Ian was about 4 years old. I intimated my concern that I was not spending enough time either at work or at home. Ian piped up and said, "but Mama, you spend lots of time with me." At that point, I knew that even if I did not spend all my time with him like many of my stay-at-home-mom friends, I spent *enough* time with him. I tried to stop berating myself about the amount of time I spent with my family and focused on making that time the best time possible.

My constant interaction with college students definitely affected the way that I treat my children. Working with college students taught me about students' behaviors; some I considered productive and others detrimental. I wanted my sons to treat their teachers as I like to be treated. As a professor, I imagined that students would take responsibility for their actions and I would not hear the "dog ate my homework" stories. I also thought that their parents would not intervene in their college students' academic struggles. Dealing with angry, accusatory parents of college students made me much less likely to intervene and advocate for my kids. I am much more likely to take a back seat and expect my child to solve his problem himself. Perhaps this put my kids at a disadvantage during elementary, middle, and high school. However, I believe that my expectation that they find solutions to their own problems has had long-lasting positive impact on my sons, developing them into independent, thoughtful, and engaged individuals. As Ian pursued his bachelor of music degree from CSU, I was able to help him navigate some of the CSU bureaucracy but mostly tried to keep out of his way. Getting to confer his degree when he graduated in 2015 was a real bonus (Fig. 3).

When asked how my career choice has impacted them, my sons responded predictably (Eric provides a few words of his own here). First, they have never experienced life with their mother staying at home. Even if other mothers stayed at home, they report that they do not feel my career choice negatively impacted their lives. Ian noted that with a Prof. Mother, a child is never on vacation. When the boys would pose a question, invariably they would stimulate the Socratic method in their mother, leading to many more questions than answers. Alternatively, a significant estimation would occur, for example, trying to figure out if there is a mole of grains of sand on Earth. Like many children of faculty members, my sons enjoyed interactions with the CSU Chemistry Club. On occasion, the kids would serve as guinea pigs for new outreach activities the club was trying out (Fig. 4).

My career choice enriched my family significantly through sabbatical leaves taken away from home. On three different occasions, the family (including a different cat on each stay) packed into the car and moved to the San Francisco

**Fig. 3** Nancy with her spouse Pete (left) and son Ian (center) at Ian's graduation from Colorado State University in 2015



**Fig. 4** Nancy's son Eric helping test a new chemistry club outreach experiment





**Fig. 5** Family ski outing (from left to right: Ian, Pete, Nancy, and Eric) in 2016

Bay Area where I worked at Stanford University. Moving to the Bay Area also gave my husband work opportunities he never would have had in Colorado. These sojourns drew the family closer as we explored San Francisco, Half Moon Bay, Pigeon Point, and more. My sons became accustomed to riding public transportation, getting themselves to and from music lessons, and experiencing some less than comfortable San Francisco bus rides with nutty people on board. They learned that you can leave everything you know, arrive in a new place, and make new friends. I believe these experiences color their own lives now, helping them to be more open to diversity and change (Fig. 5).

## Advice and Recommendations

Frequently throughout my career, I have entertained the question, “How do you do it? How do you balance career and family?” Early in my career, this question was hard to answer. “You just do it” is probably the best I could manage. At least once early in my academic career, I remember a woman graduate student who was taking the course I taught saying to me, “I don’t want to be like you. I want to have time for my family!” This comment felt incredibly depressing. Instead of serving as a role model, I felt like an anti-role model. Indeed, balancing an academic career with spouse and kids has a different meaning for women academics than it does for men [17]. But this comment resonated with me and motivated me to speak about my experiences.

Advice is a dangerous thing to give and to take. Personal and professional situations vary so much! There is no “one size fits all”. Still, I believe there are important lessons others can take from my career. Here are a few:

- Your choice of a partner is probably the most important variable you can control. Choose a partner who understands the demands of your academic career and wants to help you to succeed in it. Studies show that women tend to carry more than 50% of domestic responsibilities [18]. Choosing a partner who takes on significant domestic responsibility (cleaning, cooking, shopping, childcare, etc.) makes it possible to balance academic and personal tasks. Choosing a partner who is patient, supportive, and committed is the most important thing you can do to succeed in your position.
- When you are emotionally ready to start a family, stop using birth control. When you get pregnant, you will figure out how to work this into the equation. There are, of course, somewhat better and worse times to start or add to a family. But there is no real “right time”; so waiting to start can lead to problems associated with being pregnant later in life.
- Find out the policies which exist that can help you achieve your professional goals and exercise them. At this point (2017), many, if not most, institutions have family leave and extension to probationary periods (tenure clock) in place. Although stopping the tenure clock can seem dangerous, we must continue to educate colleagues that adding time to the probationary pre-tenure period should not raise expectations for productivity. This understanding seems to be taking root. Plan to stop the tenure clock to give yourself time to develop your relationship with your new baby. Do it and don’t worry!
- If you are planning a family or expecting a baby, have a well-devised and comprehensive emergency plan. If your regular childcare falls through, have a backup plan. Whom will you call? Who can help you? Many people will want to help—let them!
- As soon as you have enough money, pay others to do the things you don’t like to do or don’t have time to do. Time is in short supply when you have a career, let alone a career and a family. It is worth spending money for someone to clean your house, do yard work, cook your meals, or whatever you would prefer not to do.
- Look for role models and mentors. Listen to their advice and work to incorporate it into your life. When you get through the most difficult and time-consuming stages, take on mentoring for others. You will find satisfaction in being able to help others navigate career and family.
- In his book, *The Four Agreements* [19], Don Miguel Ruiz lists four agreements to live by: (1) be impeccable with your word (don’t gossip); (2) don’t take things personally; (3) don’t assume anything; and (4) always do your best. Of these, the first and last are pretty straightforward. Most of us do them without trying. The second agreement refers to praise and criticism, which often reflect issues that other people have with themselves. Not taking these personally allows us to analyze the situation without becoming hurt or glamorized. Likewise, assuming that others understand us can lead to significant problems. Much better to remove doubt about your words, actions, and intentions. These four agreements can be hard to follow, but if you can, your life will be easier.

Finally, find time for yourself. Life is short and you do not know where it will lead. Carpe diem!

### **Reflections from Nancy's Son Eric Levinger**

The most important thing to know about having a chemistry professor as a mom is that for me, she's just my mom. And that has had a major impact on me, because she was there when I needed her. So what's it like to have a professor as a mom? It's no different than having a mom who has any other job. When you're a kid, they're just your mom; growing up, they're your mom; and after you move out, they're still your mom.

One thing that I remember about from having a professor as a mom is all of her complaining about students. That's right; usually students complain about their professors but I heard the other side. Going into college I had inside information about how professors think about interactions with students. When I went to college, I knew how to talk to my professors and how to cultivate good relationships with them. Growing up with a mom in academia made many of the issues that most college students deal with seem trivial (Fig. 6).

**Fig. 6** Nancy and her son Eric on Eric's 20th birthday in Washington, DC



**Acknowledgments** I am indebted to many people who made it possible for me to balance career and family. First, to my parents, who have believed in me throughout my life. Second, to my lovely sons, who inspire me to be the best I can be. Finally, to my husband, who has supported me, tolerated insane schedules, listened to my problems and helped me to solve them, raised two amazing children, and loved me through thick and thin.

## About the Author

### *Education and Professional Career*

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|--------------|--|
| 1983         | BA Integrated Science and Physics, Northwestern University, Evanston, IL   |
| 1990         | PhD Chemical Physics, University of Colorado, Boulder, CO  |
| 1990–1992    | NSF Postdoctoral Fellow, Department of Chemistry, University of Minnesota, Minneapolis, MN                           |
| 1992–1999    | Assistant Professor, Department of Chemistry, Colorado State University, Fort Collins, CO                            |
| 1999–2005    | Associate Professor, Department of Chemistry, Colorado State University, Fort Collins, CO                            |
| 2005–present | Professor, Department of Chemistry, Colorado State University, Fort Collins, CO                                      |
| 2007–present | University Distinguished Teaching Scholar, Colorado State University, Fort Collins, CO                               |
| 2009–present | Professor of Electrical and Computer Engineering (courtesy appointment), Colorado State University, Fort Collins, CO |

### *Honors and Awards (Selected)*

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|-----------|--|
| 2016      | Jack E. Cermak Advising Award, Colorado State University           |
| 2015      | Nancy E. Levinger Undergraduate Research Fellowship, established   |
| 2014      | Fellow, American Chemical Society                                  |
| 2010      | Fellow, American Association for the Advancement of Science        |
| 2005      | Fellow, American Physical Society                                  |
| 2004      | Margaret Hazaleus Award, Women's Caucus, Colorado State University |
| 1999      | Colorado State University Undergraduate Research Mentoring Award   |
| 1994–1999 | National Science Foundation Young Investigator Award               |

Nancy has published 90 peer-reviewed (including 4 invited reviews and 18 with 16 unique undergraduate co-authors) and presented at international, national, and

regional meetings. She has mentored 10 PhD and 7 master's degree students and mentored over 40 undergraduate students and a high school student in research. She directed the NSF REU program at CSU for 7 years and founded and served on the NSF Chemistry REU Leadership Group, serving as its first chair. Nancy organized the CSU Celebrate Undergraduate Research and Creativity Poster Session for 10 years (campus-wide undergraduate research poster session) and continues to serve on its board. She has received > \$5 million in grants as principal investigator and > \$2.5 million as a co-principal investigator for multiuser, equipment, and collaborative grants. Nancy has served in leadership and governance of the American Chemical Society PHYS Division; American Physical Society, DCP Executive Committee; American Physical Society Council and Executive Committee; and Telluride Science Research Center Board of Directors.

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