General Comments

Your approach to this essay is original and exciting. My job as an editor is to shape it into its most appealing form, and to find out what could make it even more exciting. As we move forward in subsequent revisions, we should keep the following four main points in mind.

Personal Details

Your imagination and creativity is clear from your essay, but the details of your career path are less so. Aside from the fact that you like math and your father worked in a chemical plant, what has attracted you to Chemical Engineering? You don't need to devote a lot of space to this, but an anecdote or two about why you chose this field over, say, biochemical engineering, would help you stand out from your competition. Also, in your conclusion, which you left unfinished in your draft, it would help to end on a note about the personal philosophy and aspirations you will bring to the field.

Why Nanotechnology?

You write a lot about your interest in Chemical Engineering, but your decision to specialize in Nanotechnology is never addressed. What was your first experience with this field? What about it is appealing to you? What kind of potential do you see for it in the future?

Your Career Goals

After reading your essay, I know that you want to pursue a PhD in Chemical Engineering, but I don't know what you want to do after that. Do you hope to stay in academia, or go into private industry? Long-term goals are extremely important for admissions officers, who are essentially choosing a portfolio of future alumni. What kind of Purdue alum will you be?

Why Purdue?

After reading your essay, it is very clear why you are the right candidate, but it is not as clear why Purdue is the right school. The paragraph you give on the subject is rather vague, and could apply to any prestigious department of Chemical Engineering. You will see in my revision that I have removed it. Together, we should think of a more convincing way to state your reasons for wanting to study at Purdue. Are there specific professors you want to work with? Does the location appeal to you? The classes offered? Extra-curricular possibilities? You should add some of these to your essay, and I will work to integrate them into my second revision.

INITIAL DRAFT with specific comments

"I am sitting in a classroom with my professor and peers as usual and seeing that they appear to come from other different countries and discuss with English. I am in U.S. at the Purdue University and am eagerly learning about everything." Suddenly I woke up and realized it was all a dream. I remembered that Sigmund Freud in *The Interpretation of Dreams* described that wishes, which one had been thinking about, were somehow fulfilled in dreams. I fell into self-reflection. Finally, I made up my mind. This was the most important decision I had ever made which is to continue my study to a higher level and to pursue an academic success by facing the challenges provided by the University. So I want to apply the Ph.D program in the Department of Chemical and Biomolecular Engineering(DCBE) in the field of nanotechnology and Micro Technology and Interfacial Phenomena.

I have been excelling in mathematics and received high grades all throughout my school life. Particularly, I obtained the highest math scores in the National University Entrance Examinations in the city of XXX. So I have a strong ability in mathematical logic and thinking with more precision. When I was choosing my major before entering the university, I was pondering about my future, I finally made up my mind for Chemical Engineering. Because I believed I could achieve an enlightened future by applying the knowledge of physics and chemistry with the combination of mathematics into this field. The subtle influence from my family cannot be ignored either. My grandparent and father both worked in chemical plant for years. I found it to be the right door of life opened for me after I took various fascinating courses concerning this area. Fortunately, I entered it. For all these I fit quite well with the field of nanotechnology and Micro Technology and Interfacial Phenomena

The motivation to clarify different mysteries in this realm solidified after a designing course of the air drying column by using the method devised by the professor of our own college. To achieve the goal I had to learn about the available information about this topic and the basic principles governing this process such as mass and heat transfer and particle behavior when propelled by air, and then did necessary calculations and review the results. During the procedures of calculation and design, I had to incorporate the skills of Maple, Excel and AutoCAD software and my ability of analyzing and modeling as well. Thus the competence I learned here will certainly give me a hand in my future study and research. The most ideal stage to give full play of this ability would be DCBE.

Therefore, the ability I have in the subject of math, physics and mathematics can help much to understand and exploit the physical, chemical properties of nanotechnology and micro structures and the interfacial phenomena. The knowledge learned from major courses can provide me a base to further my study, and at the same time the research and computational kills ensure me successfully carry out kinds of experiments.

The chance of a two-week internship in a chemical plant provided me a chance to learn about the complexity of a factory and so gave me a further understanding of chemical engineering. Chemical engineering involved many kinds of practical problems. It was not a simply application of chemical reaction in a laboratory. It gave me a more systematic way of thinking. We should not ignore the side effect caused by the impurity of gases in the chemical process and realized the importance of the recycle of the heat released from an exothermic process to an opposite one to achieve higher energy efficiency and reduce the cost. As discussed above, a successful chemical process is the product of accurate optimization of different factors such as cost, raw material, safety and also some personal intuition. So, in some sense, chemical engineering can be called an art without any exaggeration!

Comment [r1]: This is certainly an unusual tactic to use, but I like it, and think your readers will appreicate your originality! As you will see, I have toned it down a bit in my revision… You don't want it to sound too gimmicky: for instance, many movies and stories begin this way.

Comment [r2]: The most important parts of this paragraph, which I have tried to highlight in my revision, are your field and the kind of environment you picture yourself studying it in.

Comment [r3]: Why don't you give the name?

Comment [r4]: So you like the interdisciplinary nature of the field?

Comment [r5]: You might mention a few.

Comment [r6]: This doesn't quite follow – haven't you been discussing your entry into Chemical Engineering? You need to explain why you decided to concentrate specifically in Nanotechnology.

Comment [r7]: Was this an application of nanotechnology and Micro Technology? It isn't immediately clear that it is, and the link should be established.

Comment [r8]: If this was your first experience with nanotech, how did you like it?

Comment [r9]: It's good to work your interest in the department into the entire essay, but this single sentence feels a bit unsupported and superfluous.

Comment [r10]: At this point your tripartite field is becoming cumbersome – could we abbreviate it by just referring to it as "nanotechnology"?

Comment [r11]: This paragraph doesn't seem to add anything new to your essay. I would suggest removing it, as you will see I have done in my revision.

Comment [r12]: Again, I know that chemical engineering and nanotech are closely related, but you seem to use the two too interchangeably here. The link between them needs to be reestablished.

Comment [r13]: Excellent point.

Comment [r14]: A clever point!

I have laid a solid foundation to be competitive enough by hard work, dedication, and perseverance on previous basic courses and experiments. Despite the loneliness, new language novel way of life and different challenges coming to me, I have already prepared to find a way to what I desire for—an academic career! The rigorous courses and earnest faculty from Purdue University will offer graduates better guidelines to direct their endeavors. Therefore, I can gain far more from academic experience with my will and creativity than otherwise if I am admitted by the DCBE and can further my interest in the area of nanotechnology and micro structures and the interfacial phenomena. This will also be a road to my lifelong pleasure to explore the answers to the mysteries and problems to contribute to the.

Comment [r15]: I know that you're trying to signal the difficulties you're willing to tackle to achieve your goals, but this one seems a little too frank for a Statement of Purpose. Given that you also mention Freud, you don't want your readers to become worried about you !!

Comment [r16]: This still sounds clunky, especially in a conclusion.

Comment [r17]: Contribute to the what?? You've left me curious!

EDITOR'S FIRST REVISION

If Freud was right, and every dream is a wish-fulfillment, then my subconscious is unusually transparent. Lately, my recurring dream has been this: a classroom full of intelligent students from diverse countries, carrying on engaging discussions in English, and me there too, growing in knowledge and enthusiasm. The scene could only be one place: the Department of Chemical and Biomolecular Engineering at Purdue, where I have come as a PhD student to concentrate in Nanotechnology, Microtechnology and Interfacial Phenomena. I have never been one content to let my wishes be fulfilled only in dreams, and so I am applying now to make this scene a reality.

An excellent student throughout my life, with the highest math scores of anyone in my town in the National University Entrance Examinations, my work has always been characterized by strong mathematical logic and precise thinking. When deciding on a major before entering University, Chemical Engineering appealed to me for the broad range of disciplines it brings to bear on the questions it addresses: the chance to work simultaneously with physics, chemistry and mathematics was irresistable to me. The son and grandson of chemical plant workers, it did not take much time in the fascinating courses I took before I was confirmed in my dedication to the field. I have decided to continue with a concentration in Nanotechnology because XXX.

My first practical exposure to the field came during a design course in we were asked to construct an air drying column according to methods developed by our professor. To achieve this goal I had to quickly master the available literature on the subject, and basic principles such as mass and heat transfer, and the behavior of particles when propelled by air. During the process of calculation and design, I exercised my abilities in the programs Maple, Excel, and AutoCAD, as well as in general analysis and modeling, skills I expect to employ throughout my career.

The chance to apply the theoretical knowledge I had gained in class to a real engineering problem was exhilarating, and I experienced this excitement again during a two-week internship at a chemical plant, where I had the chance to learn about the complexity of a factory, where so many of the principles of Chemical Engineering are being applied so practically. Outside the laboratory and in the real world, I gained a much more systematic way of thinking, more cognizant of the diverse factors inherent in any engineering problem, such as the impurity of gases in chemical reactions and the heat released from exothermic processes; these were no longer questions in a textbook, they were urgent matters of efficiency. A successful solution is the product of an accurate optimization of different factors such as cost, raw material, safety, and a degree of personal intuition. What had been only a science to me took on the dimensions of an art!

Hard work, dedication, and personal enthusiasm applied to my previous courses and experiments have brought me to a position where I am able and eager. Aware of the challenges ahead and of the difficulty of moving to a new country, I am ready to begin my academic career, and can think of no better place to do so than at Purdue. XXX

Comment [r18]: Here there should be a sentence about your long-term career goals. What do you hope to do after you receive your PhD?

Comment [r19]: You can name it if you want to.

Comment [r20]: Add a sentence or two about why nanotech is the most attractive subfield for you. What was your introduction to it? What do you believe its potential is?

Comment [r21]: It might be interesting to name the plant.

Comment [r22]: Here we need a new conclusion. First, you should note what attracts you specifically to Purdue. Are there certain professors you look forward to working with? Is it the location, or extracurricular possibilities, or academic philosophy? Next, to finish the essay, you need to say a few words about your personal aspirations. You left the last sentence unfinished in your draft! What do you want to contribute to?