

A scientific road not taken: My path from chemical engineering to nanotechnology and biology and medicine

My career has not been straightforward. In a way, I followed Robert Frost's poem "The Road Not Taken". Although I am a chemical engineer and I'm proud of that, I took a path from chemical engineering to nanotechnology to biology and medicine. This was very unusual many decades ago. In so doing, I met with rejection and ridicule early in my career. However, by going down that path I was able to make discoveries that I hope have saved and improved lives and I've been able to train a great number of people who are going down the road I began traveling over 50 years ago. In this lecture, I will discuss some of the chemical and engineering advances we made to create polymer and lipid micro/nanoparticles to deliver macromolecules including nucleic acids (e.g. DNA, RNA) and the impact that these systems have had.