Opening Remark of Dr. K. Novoselov's Lecture

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Good afternoon, Dr Novoselov, ladies and gentlemen.

It is my pleasure and honor to open this special lecture by the honorable Nobel laureate, Dr. Konstantin Novoselov. On behalf of National TsingHua University, I would first like to extend a warm welcome to Dr. Novoselov, welcome to TsingHua and welcome to my country!

It is perhaps the first time that we have the pleasure to receive a brand new Nobel laureate before his formal acceptance of the award. I think, therefore, it would be most appropriate to congratulate Dr. Novoselov for the well-deserved recognition and most prestigious Award he is receiving.

Dr. Novoselov and his co-researcher, Prof. André Geim will be awarded with this year's Nobel Prize in physics for their discovery of miraculous graphene. Prof. Geim was also the Ph.D. advisor of Dr. Novoselov a few years ago. Both laureates are working at Manchester University, and both were originally from Russia. According to the press release of the Nobel Prize Committee: Playfulness is one of their characteristics, they believe that one always learns something in the process of playing and, who knows, one may even hit the jackpot. Like now when playing with graphene, they write themselves into the annals of science. In the age of "big" science, it is indeed refreshing and gratifying to see "small" science makes a grand impact!

Graphene is a material with one atomic thick made of carbon atoms. If we describe the bulk crystalline graphite as a book, then graphene could be perceived as a single leaf of the book. Since we have already used and learned so much from the book for centuries, it is fitting that we should have a chance to take a good look at a single leaf and read it in greater detail.

Before 2004, scientists believed that any freestanding single crystal in 2D is just impossible based on a common sense of thermodynamics. Dr. Novoselov and Prof. Geim, however, surprised us in 2004 by separating the graphene with a very brilliant yet simple idea of using sticky type to peel the layers off. Well, it sounds like a simple idea and indeed, to characterize it as simple might be considered as crude and unprofessional, but you can be assured that it was not an easy process! Otherwise

other people would have done it long ago. Graphene makes a long list of new experiments possible which in turn lead to new twists to the phenomena in quantum physics. It possesses extraordinary properties for conducing electricity and heat and is very strong. A great deal of research has been carried out following their pioneering work. Also a vast variety of practical applications, including the creation of new materials and the manufacture of innovative electronic devices are made possible by their discovery.

The famous novelist Chang Ai-Ling （張愛玲）once said: "if possible, get famous while you are young."（出名要趁早）Although many of us also have the ambition to win a Nobel Prize, it is a well known fact that only a few giants fulfilled their ambition and still fewer to accomplish so important an achievement so young in age. Hence, I would like to urge Dr. Novoselov to enjoy this grand honor as much as he can because he has earned it. Another good news for Dr. Novoselov is that, according to a study done in the U.S., prominent academics often live longer than their peers. Furthermore, among these academics, the Nobel laureates live the longest. The theory that explains this phenomenon suggests that they live long because they have a more satisfying life. If the study is sound, it is truly a double blessing not only for Dr. Novoselov himself but also for all of us because the great mind will have more time to contribute for the betterment of all of us.

Earlier this year, Dr. James Watson, who discovered the DNA structure, visited us on our campus. Dr. Watson received his Nobel Prize in physiology or medicine in 1962 at the tender age of 34. It can be said that Dr. Watson has basked in the glory every since, for 48 years now, but he has also been instrumental in initiating human genome project and tirelessly pursuing scientific projects. I think it will be wonderful for Dr. Novoselov to set a new world record to hold the Prize for even longer years and pick up another Nobel Prize sometimes in the future since he is young, energetic and enthusiastic about his craft.

Dr. Novoselov's timely visit and his talk today will certainly give a tremendous boost to the graphene community in Taiwan. But, most importantly, Dr. Novoselov will provide us with valuable insight and inspiration and serve as an example for all of our young scientists that dreams do come true when one acts on it. Once again, I would take this opportunity to welcome Dr. Novoselov, and looking forward to his marvelous talk. Thank you, one and all!