Professor George Wahl

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It is easy to look back and to tell what role a particular person has played in your life or what kind of person he was, or what kind of difference he made to your life. It is usually more difficult to do so when you are face-to face with a person during his lifetime. That was not certainly the case with Georg Wahl.

I met Professor Wahl for the first time in 1991 while I was a student. We met during a conference in Moscow, and when I think about how to describe my initial impression of him, first what comes in my mind is the renaissance man: scientist, teacher, amateur musician and historian. By that time I knew his works on the Chemical Vapor Deposition of tungsten and high temperature superconductors and I certainly had many questions for him on that subject. Well, we talked science, but there were other subjects ranging from the current events in Russia or Germany, to ancient history, to classical music, or peculiarities of the Russian grammar; he was refreshing his Russian at that time. He sailed through different subjects, flying high at one moment and then taking a deep dive into the matter. I was absolutely fascinated with his personality, with his drive and his passion about the subjects we talked about. Later on, I learnt that his keen interest in history was probably running in his genes; he had family relations to Heinrich Schliemann, the man who discovered and excavated the ancient city of Troy. Later on, I learned about George Wahl's experiences in post war Germany, experiences which probably played a significant role in shaping his character.

A couple of years later, I was lucky enough to spend a year in his laboratory at the Technical University of Braunschweig as part of my PhD work. To be fair, I was very fortunate with having great teachers and mentors during my stay at the Moscow State University, but I still recall my time in Professor Wahl's group as one of my most significant professional and personal experiences. It was time of non-stop learning: technical learning, learning about how to work with people, learning how to operate in a different cultural environment. The atmosphere was demanding and yet very

motivational. Learning, passion, striving to find new creative solutions were the name of the game. Professor Wahl was running around spreading contagious enthusiasm, guiding, advising, helping. Indifference was not part of his world! He was generously sharing his knowledge, his experiences. It went beyond the work. We could be discussing the latest news on high temperature superconductivity, and then in the end of the conversation, he would say: "By the way, in a few days our amateur choir will be performing Fauré's requiem (Somehow, this one did not come as a surprise; after all, I'd already listened to the Wahl family quartet where he played the flute), please, come".

At one point, I was struggling with process controls of the CVD of high temperature superconductors: he dropped a pile of papers on my desk dealing with phase diagrams of the Bi-Sr-Ca-Cu-O system (one more chemical symbol and my head would have probably exploded), telling me - "Read them. I hope to learn something new from you during the next seminar". Learning from me? How is that possible?

A few times a week, he would storm by my desk in the morning, throwing the newest issue of Die Süddeutsche Zeiting in front of me - "There is an interesting article on page .... Let's discuss during lunch". "Professor, I am sorry but I cannot read German that fast" I would say to him. Well, no mercy was taken on me and a couple of months later I was able to satisfy this demand. Finally, I got it; he was genuinely interested in other opinions and he was in the non-stop learning mode himself. He was pushing my and other students' limits, but he never stopped pushing his.

"Go deep, but make it simple", he said. He certainly had that talent and that ability to condense a seemingly complex problem to a set of very practical and simpler concepts – a great gift, in materials science in particular. Understanding gas dynamics in CVD reactors, calculating the diffusion coefficients, dealing with intricacies of the surface chemistry would suddenly become simple after his explanations. Seemingly simple and easy when he talked about it, but if one followed his previous research it would become obvious how much hard work, trials and errors were behind that ability to make it simple. Hard work which he never stopped demanding from his students and peers; hard work, which he never stopped demanding from himself.

Being grounded in practicality and realism in solving problems in applied science is a great trait. Having the ability to dream is an even greater one. Professor Wahl once

said during his lecture - “You need to dream about discovering your own Troy. It can be small, it can be big, but it needs to be yours”, and then he smiled: “Just do not lose your touch with reality and time on the way. As a first step, you can tell me during the next seminar about hydrogen adsorption on the silicon surface”. Switching between serious matter and something humorous was very natural for him. He loved cultural references when he was joking. One time, several of us were working very late to meet a deadline for a paper submission. Other colleagues were leaving the building, turning off the equipment and lights in their offices. The place was growing more and more quiet. Finally, there were just a few of us left in his corner office. Professor Wahl looked around and said: “It feels like Haydn’s Farewell Symphony”. I did not say anything - I simply did not know that piece of music. Next day I looked it up in the Brockhaus encyclopedia (yes, it was before the internet) and several days later I went to the music store and bought the CD with the Farewell Symphony. I still keep this CD. Musicians may be gone but the music stays.