

## Waiting for ~~Goethe~~ (Toennies)

by Adalbert (Adi) Ding, Berlin 2024

My first – virtual - encounter with Peter was during my first foreign “conference” (summer school) in Varenna at Lake Como in Italy starting a week after my oral PhD examen. For me it was the first time I met important scientists from all over the world in person.

Interesting talks, discussion in the evenings (with red wine) and the wonderful surrounding of the lake were ideal to get to know people with whom I interacted for the first time. Pretty soon an unusual discussion started: “Is Toennies coming?” said A: “No, he’s too busy organizing his move to Goettingen...”: said B: “Certainly he will be coming...” said C. And D said: “But he might come for a day or so...”. The discussion went on like this till the end of the Summer School but Peter Toennies did not show up: he was too busy in Goettingen.

After I returned from Toronto in 1973, where I had spent 2 years as a postdoc with John Polanyi, I started attending the spring meetings of the Physical Society. I met Peter and his group and other people from Göttingen. We got on very well with each other, not only at the meetings, but also in the pubs in the evening. During that time I knew more or less all of his students and postdocs and many guest scientists which Peter collected like other people stamps.

Later in 1981 Peter and me (together with professors Gerischer, Hofacker and Henglein) organized the conference “50 Years of Chemical Dynamics” in honor of Polymath Michael Polanyi, his postdoc Henry Eyring, and his PhD student Eugene Wigner who had written the first publications on chemical dynamics and calculated the first potential energy surfaces for 3-atomic systems, setting the foundation for the field of Theoretical Chemistry. We were proud that we had invited five future Nobel laureates (marked from left to right Yuan Lee, Martin Karplus, Dudley Herschbach, Gerhard Ertl, and John Polanyi).



Through Peter I met many of his guests, like Bob Watts who was a regular visitor to Goettingen. That was the start of a fruitful cooperation – I spent considerable time in Australia in Bob's laboratory - and the beginning of long-lasting friendship with Bob and his family.

We had frequent scientific exchanges as I investigated the collisions of ion beams, cluster ion beams, Fullerenes and Nanotubes. At one time we did a joint experiment – one half came from Goettingen, the other half from my lab in Berlin – with doped Helium Clusters photoionized at the Berlin Synchrotron BESSY I. Ralf Froechtenich and Ulrich Henne were participants from Goettingen, Martin Fieber-Erdmann, Thomas Drewello from Berlin.

Once Peter gave me significant support when they were political problems at my institute in Berlin. I was very grateful for that. Anyway, for a long time, I had close contacts with Peter and his group and also the other members of the Institut fuer Stroemungsforschung.

In the meantime, I retired from my position at the Universitaet Berlin, and transformed into the “(Un-)Ruhestand” (state of un-rest) chasing solar eclipses all over the world.

Now I still am chasing particle beams, this time highly ionized beams of e.g.  $\text{Fe}^{13+}$  or  $\text{Fe}^{10+}$  ions, generated in the solar corona. With Shadia Habbal's group from the University of Hawaii I have been participating in the expeditions to 12 total solar eclipses since 2009 all over the world and for that developed very sensitive special PAMIS (Partially Multiplexed Imaging Spectrometers) type spectrometers to measure Doppler-shift and -broadening of various coronal spectral emission lines. In 2023 we were able fly our instruments during a total solar eclipse in Western Australia on a kite and in 2024 over the US on a former spy plane (WB-57) at a height of 50000 ft. The year-long contacts with Peter and his group were a great help and inspiration, also for my solar adventures.

In this respect, I regard myself as Peter's student h.c.



*The WB-57 crew, Oliver Mayer and me in front of the WB-57 high altitude research aircraft*



*Top: 2 PAMIS spectrometers (visible and UV) in the nose of the WB-57 aircraft*  
*Bottom: 2 WB-57 aircraft on the Ellington airfield in Houston, Texas (2024)*