

“The Young Kid on the Block”

“It’s hard to believe he’s sixty already. To me he’s still the young kid on the block”, said Norman Ramsey at the start of his speech about Theodor Hänsch. And yet this young “postdoc” from Heidelberg became a multi-award winning researcher, a director at the MPQ and physics professor at the LMU. 86-year-old Ramsey, one of the winners of the Nobel Prize for physics in 1989, was among a group of prominent physicists who accepted the invitation of the MPQ and LMU and came to Munich. The speakers also included two of this year’s three Nobel laureates, Wolfgang Ketterle from the Massachusetts Institute of Technology (MIT) and Carl E. Wieman from the University of Colorado (Boulder, USA). Two Nobel Prize winners from 1987, Claude Cohen-Tannoudji from the Collège de France (Paris), and Steven Chu from Stanford University offered a mixture of anecdotes and the latest research results.

Hänsch and his colleagues are working on the “interaction” between light and matter. This is the domain of modern laser spectroscopy, the subject of the symposium. Herbert Walther, also a director at the MPQ and professor at LMU, emphasized in his welcome speech that Hänsch is one of the most creative brains on the laser scene. His scientific achievements include the creation of a laser with a variable light colour, the idea of cooling atoms using laser light, Bose-Einstein condensation on an “atom

chip” to the optical “frequency comb”. The latter procedure, which involves the accurate setting of light frequencies, is capable of improving the transmission capacity of optical news wires to a considerable degree. Hänsch was nominated for this year’s “Deutscher Zukunftspreis” (German Future Prize) for this work.

Subsequent speakers proved that successful researchers also have a healthy sense of humour and fun. Steven Chu played some piano music from a tape, which he had sent using a particle accelerator as a “telephone line”: it was not electrons but their anti-particles, the positrons, that had transmitted the music. The tape had plenty of static noise on it, but the audience was enthusiastic. After all, the sound fitted the light-hearted title of Chu’s talk perfectly: “High-noise low resolution spectroscopy” – the exact opposite of what experimental physicists normally aim for! Like the other speakers, he too presented serious research results that show how fertile the field of laser physics is. In 1992 he succeeded for the first time in isolating and pulling apart a single DNA molecule using two laser light “tweezers”. This has since given rise to some fascinating work on the behaviour of individual bio-molecules.

“Successful researchers do the things they love doing”, said Hänsch in his speech of thanks. He advised the students present to follow this maxim rather than allowing themselves to be troubled by the “fickle job market”

ROLAND WENGENMAYR

In celebration of THEODOR W. HÄNSCH’S 60th birthday, the MAX PLANCK INSTITUTE FOR QUANTUM OPTICS (MPQ) and the LUDWIG-MAXIMILIANS UNIVERSITY (LMU) invited guests to Munich for a special symposium. Renowned “laser physicists” from all over the world attended the event. Five Nobel Prize winners gave talks in the great hall of the LMU, which was filled to capacity.



Theodor W. Hänsch with the other physics Nobel Prize winners who celebrated with him. From left: Claude Cohen-Tannoudji, Wolfgang Ketterle, Theodor Hänsch, Rudolf Mößbauer, Norman Ramsey, Carl Wieman and Steven Chu.



Whether organising the party or cutting the birthday cake – even when she is on his left she is still his “right-hand woman”: Rosemarie Lechner, Hänsch’s secretary at the Max Planck Institute for Quantum Optics. Mr. and Mrs. Ramsey (sitting) observe the procedure with fascination.