

Professor Dr Hendrik (Henk) Schenk (1939–2023)

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Henk Schenk passed away on Thursday 14 September 2023. He was a very amiable, good-natured crystallographer who contributed a great deal to the Dutch and international crystallographic communities.

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Henk, born in Koog aan de Zaan, studied chemistry at the University of Amsterdam (UvA) and learned crystallography from Caroline MacGillavry, with whom he also obtained his PhD with the thesis *Automation of the symbolic addition method: Application to some compounds from the vitamin-A chemistry* in 1969. He developed the 'direct method' program *SIMPEL*, which used triple-product phase relationships for *ab initio* phasing; later the so-called 'quartets' and 'quintets' phase relationships were added. Henk worked and published with Herbert Hauptman (van der Putten *et al.*, 1980), who received the Nobel Prize in Chemistry in 1985 with Jerome Karle for 'their outstanding achievements in the development of direct methods for the determination of crystal structures'.

Henk became a personally appointed Professor of Direct Methods in Crystallography at UvA in 1980. Henk liked to teach, which resulted in a pamphlet for the Commission on Crystallographic Teaching of the International Union of Crystallography (IUCr) in 1984 (*An Introduction to Direct Methods*, <https://www.iucr.org/education/pamphlets/17>). In The Netherlands, he played a big role in the 'direct methods' discussion group that met regularly at the beginning of the 1980s.

In 1988, the position of Chair of Chemical Crystallography at UvA was established and assigned to Henk. He held this position until his retirement in 2004. Henk gathered a large group of students from The Netherlands and abroad who enjoyed the academic freedom given to them. Always searching for new scientific topics, Henk could explore a whole new area when his group obtained an X-ray powder diffractometer at the beginning of this century. Structure solution from X-ray powder data was still in its infancy and provided great opportunities for new developments, from software to exploring historical paints with X-rays. He was strongly involved in the Dutch–Belgian Beamline (DUBBLE) at the ESRF in Grenoble, which resulted in many publications and

theses from his students. One of his most beloved subjects was the phase behavior of chocolate, perhaps because he lived remarkably close to a chocolate factory.

In addition to his numerous scientific publications, Henk was also one of the Editors of *International Tables for Crystallography* Volume H: *Powder Diffraction* (published in 2019) and a Co-editor for *Acta Crystallographica Section A* from 2008 to 2021. He also wrote a survey of crystallography in *De geschiedenis van de scheikunde in Nederland deel 3 (The History of Chemistry in the Netherlands, Part 3; Homburg & Palm, 2004)*.

Henk held many different board positions, including serving on the IUCr's Executive Committee from 1993 to 2005 and as IUCr President from 1999 to 2002. He was President of the Dutch Chemical Society (KNCV) (in 1984) and the Dutch Fundamental Research Community for Crystal and Structural Research, as well as Dean of the Chemistry Faculty of the UvA (in 1994). On 30 March 1990, he founded, together with Roeli Olthof-Hazekamp, the Dutch Society for Crystallography, of which he was the first President and later became an honorary member.

Henk was a true citizen of the Zaanstreek, the industrial area north of Amsterdam: he was straightforward and loathed

injustice. After Hugo Rietveld received all the credit for the 'profile method' for structure refinement from powder diffraction data, which became known as 'the Rietveld method', Henk and Bob van Laar published an article in *Acta Crystallographica Section A* (van Laar & Schenk, 2018) about its history. Based on this, Henk advocated referring to this method, first described by Loopstra & Rietveld (1969), as the 'Loopstra method' in recognition of the scientist who came up with the idea.

We lose with Henk a colorful and inspiring crystallographer, and we wish his family much strength with this loss.

References

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