

Jean-Pierre Hansen Biography

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Jean-Pierre Hansen (May 10, 1942—) was born in Luxembourg, son of George Hansen, ingénieur civil des mines, and Simone Hansen. He spent his youth in Luxembourg, where he notably attended l'Athénée Grand-Ducal (1956-1960).

Hansen studied at Université de Liège, where he obtained a licence de physique (1964). He then obtained a diplôme d'études approfondies (DEA, 1967) in physics at Université de Paris, for a thesis entitled "État fondamental de l'hélium 3 et de l'hélium 4 solides au 0 absolu", under the supervision of Dominique Lévesque, and a thèse d'état from Université Paris-Sud for a thesis entitled "Contribution à l'étude des systèmes de Lennard-Jones classiques et quantiques", under the supervision of Loup Verlet. He became attaché (later chargé) de recherche CNRS upon graduating, spending 1970-1971 as a postdoctoral scholar in the Physics Department at Cornell University. He joined the Laboratoire de Physique Théorique des Liquides of Université Pierre and Marie Curie as Professeur associé in 1973 and became Professeur in 1977. In 1986, he became research director in the newly-created École Normale Supérieure de Lyon, where he created the Laboratoire de Physique the following year. He then spent 1996-1997 as visiting professor at the physical chemistry department of the University of Oxford and from 1997 to 2007 held the 1968 Professorship of Chemistry at University of Cambridge. Upon retiring from Cambridge, he joined the Laboratoire PHENIX of Université Pierre et Marie Curie (later Sorbonne Université).

Hansen was one of the early trainees in the field of molecular simulations, a method which he used to study various simple and complex liquids throughout his career. In the mid-1980s, he notably pioneered a computational study of the supercooled regime of a binary soft sphere model glass former. This effort eventually led him to conduct some of the early numerical tests of the mode coupling theory (MCT) of glasses. In 1989, he organized the Les Houches school on "Liquides, cristallisation et transition vitreuse = Liquids, freezing and glass transition", which included a course on MCT. The third edition (2005) of his seminal book *Theory of Simple Liquids* also included a pedagogical treatment of MCT.

Hansen is a Fellow of the Royal Society (2002). He has notably received the Prix Spécial (1998) from the Société Française de Physique for "the scientific work he carried out in France over a period of over 30 years"; the Liquid Matter Prize (2005) from The European Physical Society; the Rumford Medal (2006) from the Royal Society "for his pioneering work on molten salts and dense plasmas that has led the way to a quantitative understanding of the structure and dynamics of strongly correlated ionic liquids"; and the Berni J. Alder Prize (2013) from the Centre Européen de Calcul Atomique et Moléculaire for "outstanding contributions to the developments in molecular dynamics and related

simulation methods for understanding the properties of materials ranging from simple and complex liquids and solids to proteins, ionic liquids and plasmas”.