

# John A. Mydosh Biography

March 21, 2021. Patrick Charbonneau

John Anthony Mydosh III (June 25, 1938-), son of John Anthony Mydosh Jr., assistant city-park superintendent, and Margaret E. (Ochs) Mydosh, spent his childhood in Bayonne, New Jersey, USA. He attended Saint Peter's Preparatory high school in Jersey City.

Mydosh did his undergraduate studies at Saint Joseph's College, in Philadelphia, majoring in Electronic Physics within a work-study program at the Philco Corporation. Upon completing his BS-EP, he took a full-time position as advanced-development engineer at RCA Corporation in Somerville, New Jersey. After this brief stint at RCA, he embarked on graduate studies at the Stevens Institute of Technology, in Hoboken, New Jersey, receiving the PhD in solid state physics (1965) for a thesis entitled *Dependence of the critical currents in superconducting films on applied magnetic field and temperature*, under the supervision of Prof. Hans Meissner. Afterwards, he was initially assistant professor of physics at Fordham University, New York (1966-1970), then researcher at the Institut für Festkörperforschung (solid state research) in Jülich (1971-1975), before joining the faculty at Leiden University (lector-associate professor, 1975-1979; full-professor, 1979-2002), where he is now emeritus. During his Leiden retirement Mydosh was guest professor at the Max Planck Institute in Dresden, the University of Cologne and Los Alamos National Laboratory.

Mydosh first discussed the (then vague) notion of spin glasses with Bryan Coles during a four-month fellowship at Imperial College, fall 1970. He soon thereafter published the first experimental evidence of (gold-iron) a spin-glass system (1972). This finding propelled the theoretical efforts that eventually led to the formulation of the Edwards-Anderson and Sherrington-Kirkpatrick models (1975). Mydosh was one of the firsts to test their associated predictions in the laboratory. Over the following couple of decades, his group has identified and characterized a variety of spin glasses. He also wrote the seminal book *Spin glasses: an experimental introduction* in 1993. He has since researched extensively on other topical problems, such as the colossal magnetoresistance and the strongly correlated electrons of "hidden order".

In 1991, Mydosh became a fellow of the Koninklijke Nederlandse Akademie van Wetenschappen (Royal Dutch Academy of Science) and of the American Physical Society "for his studies of the magnetic and superconducting properties of new materials, especially the spin glasses." He has published more than 500 peer-reviewed publications which have gained over 20,000 citations.