

Editorial

It was with great pleasure and pride that we acted as guest editors of this special issue of the *Journal of Solid State Chemistry* honoring Paul Hagenmuller on the occasion of his 80th birthday.

We both met Paul at the end of the 1950s during our studies at the University of Rennes, where he transmitted to us his passion for a very new part of chemistry, solid state chemistry, of which he is one of the most eminent founders. Our respective scientific routes and our personal relationship have always been very close.

Paul Hagenmuller was born on August 3, 1921, in Alsace. He was a scholar at the University of Strasbourg, which, at the beginning of the Second World War, withdrew to Clermont-Ferrand. A member of the resistance movement, he was arrested and then imprisoned in the concentration camps of Buchenwald and Dora (1943–1945). These hard times forged his character and gave him a particular feeling of relationship with other people and conviviality.

Coming back to France in 1945, he became a researcher at the CNRS and prepared his doctorate at “La Sorbonne” in Paris with André Chrétien (1950). Astonishingly, and quite in line with his strong character, he did not apply for an academic position in France, but left Paris to teach and do research for a few years (1953–1956) in Vietnam, first in Hanoi and then in Saigon. He was very stricken by his stay. South East Asia is still his second homeland, as are also China, Japan, Korea, India, South America, or, closer to us, central European countries or Morocco. Paul Hagenmuller is “un homme du monde” (man of the world) in the literal meaning of the French expression.

As a professor at the University of Rennes, he founded a modern laboratory, which energized the local environment and aroused the interest of the University of Bordeaux. In the same way as this town today organizes the transfer of famous soccer players, the University offered him a professorship and a brand-new laboratory for about 20 co-workers who followed him to Bordeaux (1960).

The international adventure actually started in 1964 with the organization in Bordeaux of the first CNRS International Symposium on Oxygenated Compounds of Transition Elements in the Solid State. The huge success of this meeting opened outstanding scientific collaborations for the laboratory.

Ten years later, the “Laboratoire de Chimie du Solide” (LCS) became a “laboratoire propre” of the CNRS. Paul Hagenmuller was its director until 1985. At this time, a circumstantial rule forced him to leave the directorship. Today, Paul is still an active scientist who speaks on science at the four corners of the world, as illustrated by his July schedule just before his 80th birthday:

- Oslo: 8th European Conference on Solid State Chemistry. He initiated this type of meeting in 1978.
- Bordeaux: 13th European Symposium on Fluorine Chemistry.

The three major axes of Paul Hagenmuller’s view of solid state chemistry were

- relationship between structure, bonding, and properties,
- overtures to physics, and
- industrial applications.

Today, all these points are classical and quite common, but the situation was different at the beginning of solid state chemistry. Paul Hagenmuller was an enlightened pioneer. He put his mark on the main fields of materials science:

- On the oxides, heritage of the CNRS International Symposium of 1964, with oxygenated vanadium and tungsten bronzes. On this subject, Paul worked closely with scientists such as Arne Magneli, Dave Wadsley, Nevill Mott, and John Goodenough. These solids are the parents of today’s materials such as cathode intercalation materials and spin-Peierls or spin-ladders model solids. Also on oxides with transition elements at high valences—Fe, Co, Ni, and Cu—which led, 30 years later, to high- T_c superconductors.

- On borides and silicides, which, after a long desert crossing, have encountered renewed interest.
- On hydrides and fluorides, in friendly collaboration with Neil Bartlett.

Therefore, the diversity of papers coming from most of the great scientific countries for this special issue of the *Journal of Solid State Chemistry* is not surprising. The considerable richness of their contents echoes that of Paul’s scientific life.

Paul Hagenmuller is a member of numerous prestigious scholarly academies (about 15) and has received several international awards such as the Humbolt, the Moissan, and the “Fondation de la maison de la chimie.”

We look forward to many more years of research accomplishments for him and we warmly thank all the contributors to this special issue dedicated to Paul Hagenmuller on his 80th birthday.

Michel Pouchard
Michel Tournoux