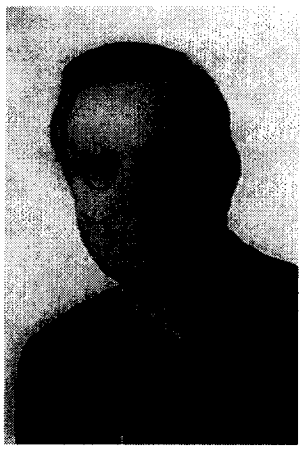
ELSEVIER

Journal of Organometallic Chemistry 502 (1995) vii–viii

Journal of Organometallic Chemistry

Editorial



Henri Brunner at age 60: organometallic chemistry in the world of chirality

When I joined the research group of Henri Brunner — who had just started as a young chair professor at the University of Regensburg — in 1971, chirality was a rather new phenomenon in organometallic chemistry. At that time, nobody could imagine how important stereoselective catalytic processes using chiral organometallics would become in the 1980s. Chiral ligands are known nowadays to perform excellently in triggering the stereochemistry of metal-catalyzed conversions of organic compounds, and there is an increasing number of structurally sophisticated products (e.g. pharmaceuticals) that are being synthesized in this way.

As a young "Dozent" at Technische Universität München, Henri Brunner recognized optical activity in a series of tetrahedral cyclopentadienyl complexes of iron. They were shown to exist as pairs of enantiomers (Eike Schmidt, Hans-Dieter Schindler) that would racemize under certain conditions. Stereochemical studies with regard to configurational stability and reactivity were performed by the Brunner research group in the early 70s. Diastereomeric cyclopentadienyl molybdenum complexes of square-pyramidal structure were discovered and studied in terms of their (intramolecular) epimerization (Wolfgang A. Herrmann). What followed was an extraordinarily fruitful, truly pioneering research on optically active transition-metal complexes, covered by approximately 100 original publications. Quite a number of these were published in the *Journal of Organometallic Chemistry*.

In the late 70s Brunner entered the field of chiral ligands to which area he added, for example, the configurationally stable "NORPHOS". This ligand effects high enantiomeric excesses in a number of reactions and is in the meantime commercially available. A great number of new chiral ligands of the P- and N-type (phosphines, Schiff bases, oxazolines, macrocyclic binaphthyl derivatives, "dendrimeric" phosphines) were developed in Henri Brunner's rapidly growing research group, concomitant with a plethora of catalytic applications (e.g. hydrosilylation, cyclopropanation, decarboxylation, Grignard cross-coupling, transfer hydrogenation). "Multiplication of chirality" has ever since been Henri Brunner's scientific motto, landmarking him as one of the most innovative and productive present-day chemists on the interface between inorganic, organic, organometallic and catalytic chemistry.

Henri Brunner was born on October 4, 1935, in Burkhardtsdorf in the Erzgebirge. As a child he came to Niederbayern where he lived with his parents near the city of Deggendorf by the Danube River on the rim of the Bavarian Forest. After he had finished his high-school studies, he enrolled at the Universität München where he received his diploma in 1960 and a Ph.D. under the direction of Ernst Otto Fischer in 1963. His Ph.D. work was concerned with metallation reactions of dibenzenechromium as a means to functionalize this molecule. He then took a postdoctoral position at UCLA with Herb Kaesz, with whom he worked in the area of organometal hydrides (e.g. $(C_5H_5)_2WH_2$). When he returned to Munich in 1964, Ernst Otto Fischer had become the successor of Walter Hieber as chair of inorganic chemistry at Technische Universität München. In that institute, Henri Brunner started to work on his "Habilitation", with the main focus being on organometallic stereochemistry (see above). For his work on metal nitrosyl complexes and his early achievements of making stereochemically stable tetrahedral

SSDI 0022-328X(95)05804-4

complexes (e.g. (η^5-C_5H_5)Fe(CO)(NO)X), he received the Carl-Duisberg award of the Gesellschaft Deutscher Chemiker in 1970 and was offered the position of chair of inorganic chemistry at the then new Universität Regensburg (1971). Subsequent offers from Universität Essen (1976) and the University of Florida at Gainesville were rejected. In 1993, Henri Brunner received the prestigious German–French Alexander von Humboldt award, which brought him into close scientific collaboration with Henri B. Kagan, his congenial French colleague in the field of organometallic stereochemistry.

Henri Brunner's scientific leadership in an important area of modern chemistry was recognized early by the scientific community and, for this reason, he was asked to serve on a number of Advisory Boards (*Tetrahedron: Asymmetry*; *Monatshefte für Chemie*; *Bull. Soc. Chim. Belg.*), and was elected chairman of the Advisory Board of "*Angewandte Chemie*". The *Journal of Organometallic Chemistry* elected him an Editorial Board member in 1994. He has also been a member of the organizational committee of the International Conferences on Organometallic Chemistry.

This short laudatio would be incomplete if, beyond outstanding scientific achievements, the academic teacher and scientific mentor Henri Brunner was not recognized. His warm personality has gained him numerous friends not only among his academic peers, but also among his students. This special volume of the *Journal of Organometallic Chemistry* mirrors the respect and personal friendship that his peers feel for him. As his former Ph.D. student who received both the Ph.D. and the "Habilitation" in his stimulating academic environment, I have spent ten close years with Henri Brunner. On behalf of his many students, I wish to say thank you, both for your patience and for being a shining example of a truly academic teacher!

Wolfgang A. Herrmann
Technische Universität München