

- 5 U. Berndt, B. Erdmann and C. Keller, *Angew. Chem.*, 1972, **84**, 537; *Angew. Chem. Internat. Ed. En.*, 1972, **11**, 515
- 6 U. Berndt, B. Erdmann and C. Keller, *U.S. Patent*
- 7 H. Holleck, *Kernforschungszentrum Karlsruhe Rept. KF K-1011*, 1969
- 8 H. Holleck, Proc. 3rd Internat. Conf. on Solid Compounds of Transition Elements, Oslo, 1969
- 9 E. D. Eastman, L. Brewer, L. A. Bromley, P. W. Gilles and N. L. Lofgren, *J. Am. Ceram. Soc.*, 1951, **34**, 128
- 10 R. A. Mercuri and J. M. Criscione, *Abstr. Papers, 158th Mtg., Am. Chem. Soc.*, 1969, INOR 33
- 11 H. Holleck, *J. Nucl. Mater.*, 1968, **28**, 339
- 12 H. Holleck and H. Kleykamp, *J. Nucl. Mater.*, 1970, **35**, 158
- 13 G. Grube and M. Flad, *Z. Elektrochem.*, 1942, **48**, 377
- 14 W. Bronger and W. Klemm, *Z. Anorg. Allgem. Chem.*, 1962, **319**, 58
- 15 A. S. Darling, G. L. Selman and R. Rushforth, *Platinum Metals Rev.*, 1970, **14**, 54
- 16 *Ibid.*, 1970, **14**, 95
- 17 *Ibid.*, 1970, **14**, 124
- 18 *Ibid.*, 1971, **15**, 13
- 19 A. S. Darling, *Platinum Metals Rev.*, 1967, **11**, 138
- 20 W. Bronger, *J. Less-common Metals*, 1967, **12**, 63
- 21 R. D. Hutchens, V. U. S. Rao, J. E. Greedan, W. E. Wallace and R. S. Craig, *J. Appl. Phys.*, 1971, **42**, 1293
- 22 B. Erdmann, *GIT*, 1972, **16**, 1283
- 23 M. Hansen and K. Anderko, Constitution of Binary Alloys, McGraw-Hill, New York, 1958, p. 876
- 24 B. Erdmann, *Messen u. Steuern*, 1972, **H29**, 27
- 25 H. Holleck, *J. Nucl. Mater.*, 1972, **42**, 278
- 26 H. Holleck, *Monatsh. Chem.*, 1971, **102**, 1699
- 27 N. Schmidt and C. Keller, unpublished data

Science Awards to Platinum Metals Research Workers

PROFESSOR GEOFFREY WILKINSON AND DR VLADIMIR HAENSEL

The achievements of two research workers prominent in the platinum metals field were recognised in October 1973, when awards to Professor Geoffrey Wilkinson and Dr Vladimir Haensel were announced. Both recipients have contributed to past issues of *Platinum Metals Review*. In the January 1959 issue Dr Haensel described "The Penex Process for Pentane Isomerisation". In January 1964 he contributed "Duofunctional Catalysts in the Petroleum Industry", while Professor Wilkinson reviewed "Organometallic Compounds of the Platinum Metals". Wilkinson then reviewed "Tertiary Phosphine Complexes of the Platinum Metals" in the April 1968 issue.

Professor Wilkinson, now of Imperial College, London, has been awarded the Nobel Prize for chemistry jointly with Ernst Fischer. The award was made for determining the structure of "sandwich" compounds, initially of ferrocene, and subsequently synthesising many other such compounds. Ruthenocene is one such platinum metal compound. The original work was carried out in 1952 when Wilkinson was teaching at Harvard. Since returning to London in 1956 his interests have gradually shifted to other areas, among which the development of some of the most active homogeneous catalysts is of particular importance to the chemistry of

the platinum metals. His name is closely associated with the family of catalysts based on tris(triphenylphosphine)chlororhodium, $(\text{Ph}_3\text{P})_3\text{RhCl}$, from which the carbonyl complexes $\text{RhCl}(\text{CO})(\text{Ph}_3\text{P})_2$ and $\text{RhH}(\text{CO})(\text{Ph}_3\text{P})_3$ used in hydroformylation reactions have been developed.

The National Medal of Science, the U.S. Federal Government's highest award for distinguished achievement in science, mathematics and engineering, was presented by President Nixon at the White House on October 10th to ten scientists, among whom was Dr Haensel, Vice-President for Science and Technology of the Universal Oil Products Company, Des Plaines, Illinois, for "his outstanding research in the catalytic reforming of hydrocarbons which has greatly enhanced the economic value of our petroleum natural resources". Dr Haensel's work has, of course, included responsibility for the development and improvement of the series of U.O.P. Platforming catalysts since their inception. Platinum-based catalysts for the reforming of hydrocarbons were first developed at U.O.P. and Haensel's team has constantly upgraded their performance, more recently by the introduction of bimetallic catalysts in which a second metal synergistically improves the reforming performance of platinum.

F. J. S.