

Supplementary Material

James Douglas Morrison 1924–2013

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CSIRO Career

1949 appointed as Senior Research Officer

1953 Principal Research Officer

1960 Senior Principal Research Officer

1964 Chief Research Officer

La Trobe University

Foundation Professor of Physical Chemistry 1967-1990

Emeritus professor 1990-2103

Organizations and Participation in Professional Life

As a senior member of staff in a young university, Morrison was deeply involved in administrative and organizational matters, serving on the Academic Board (1982-1984) and University Council (1968-1970). Of the committees on which he served, the most significant was his chairmanship of the University Computer Committee (1968-1985). From 1968-1971 he was Chairman of the Committee to found a third University College at La Trobe, and as Chisholm College became a reality he was its Foundation resident Head (1972-1977).

His expertise was sought by other educational organizations that he served as a member of the Academic Committee for Applied Sciences of the Victorian Institute of Colleges (1975-1978); a foundation member of Council of the Victorian Institute of Marine Science (1978-1982); the course committee for Chisholm Institute of Technology (1983-1985); the committee of review for the Research School of Chemistry at the Australian National University; and the Committee for an Aboriginal Pharmacopoeia (1986-1988)..

For CSIRO he was a member of the *ad hoc* Computing Policy Committee (1980-1981); Chairman of the Committee of review of Scientific and technical Library and Information Services (1981-1982); and a member of the committee of review of CSIRO Divisions concerned with atmospheric physics (1981-1982).

Morrison became a member of the Royal Australian Chemical Institute in November 1950, and was elected to Fellowship in July 1958. In 1953, as a young chemist, he was awarded the Institute's Rennie Memorial Medal, and in 1961 the H.G. Smith Memorial Medal for significant achievement. He was a member of the Federal Council and Executive (1976-1978), and Chair of the Physical Chemistry Division (1975-1978).

Other professional society memberships included the Royal Society of Chemistry, London; Royal Society of Edinburgh; American Society for Mass Spectrometry; Australia and New Zealand Society of mass Spectrometry; and he was a member of Sigma Xi. For the period 1980-1986 he was a member of the Advisory Editorial Board of the journal in which he had published much of his research, the *Journal of Chemical Physics*.

He was elected to Fellowship of the Australian Academy of Science in 1964, and subsequently participated in the Academy's Science and Industry Forum. He was a member of Sectional Committee 3 (Chemistry, 1964-1968 and 1981-1984), and Vice-President of the Academy (1986-1987).

He was a member of the Australian Research Grants Committee (1980-1984) and chair of its Chemistry Sub-committee (1981-1984). In a more specialised role he was Chairman of the National Committee for CODATA and Scientific Information (1979-1985).

He was a member of the Council of the Royal Society of Victoria and its President in 1985.

Publications

1. J.D. Morrison, W.P. Binnie, J.M. Robertson, Effect of hydrogen atoms on intensities of X-ray reflections, *Nature* 162 (1948) 889 – 890.
2. J.D. Morrison, J.M. Robertson, The crystal and molecular structure of certain dicarboxylic acids. Part IV. β -succinic acid, *J. Chem. Soc.* (1949) 980 –986.
3. J.D. Morrison, J.M. Robertson, The crystal and molecular structure of certain dicarboxylic acids. Part V. Adipic acid, *J. Chem. Soc.* (1949) 987–992.
4. J.D. Morrison, J.M. Robertson, The crystal and molecular structure of certain dicarboxylic acids. Part VI. Sebacic acid, *J. Chem. Soc.* (1949) 993–1001.
5. J.D. Morrison, J.M. Robertson, The crystal and molecular structure of certain dicarboxylic acids. Part VII. β -glutaric acid, *J. Chem. Soc.* (1949) 1001–1008.
6. J.D. Morrison, The application of the mass spectrometer to chemistry, *Aust. Chem. Inst. J. Proc.* (1950) 339 –350.
7. G.R. Hercus, J.D. Morrison, Volatile products of apples: mass spectrometric analysis, *Aust. J. Sci. Res. B-4* (1950) 290 –292.
8. J.D. Morrison, Preliminary examination of the crystal structures of colchicine and its copper salt, *Acta. Crystallog.* 4 (1951) 69 –70.
9. J.D. Morrison, Studies of ionization efficiency. I The determination of molecular appearance potentials using the mass spectrometer, *J. Chem. Phys.* 19 (1951) 1305–1308.
10. G.R. Hercus, J.D. Morrison, An instrument for the rapid determination of ionization efficiency curves using the mass spectrometer, *Rev. Sci. Instrum.* 23 (1952) 118–120.

11. J.D. Morrison, A.J.C. Nicholson, Studies of ionization efficiency. II The ionization potentials of some organic molecules, *J. Chem. Phys.* 20 (1952) 1021–1023.
12. J.D. Morrison, Studies of ionization efficiency. III. The detection and interpretation of fine structure, *J. Chem. Phys.* 21 (1953) 1767–1772.
13. J.D. Morrison, The direct production of molecular electron spectra using the mass spectrometer, *J. Chem. Phys.* 21 (1953) 2090–2091.
14. J.D. Morrison, An automatic ionization efficiency digital recorder, *Rev. Sci. Instrum.* 25 (1954) 291–293.
15. J.D. Morrison, Electron impact spectroscopy, *Rev. Pure Appl. Chem.* (1954) 22–59.
16. J.D. Morrison, Application of the mass spectrometer to the study of the upper energy states of molecules, *J. Appl. Phys.* 28 (1957) 1409–1413.
17. H. Hurzeler, M.G. Inghram, J.D. Morrison, Study of photo-ionization efficiencies using a mass spectrometer, *J. Chem. Phys.* 27 (1957) 313–314.
18. J.D. Morrison, H.E. Stanton, Fragmentation of methane by electron impact, and the latent heat of sublimation of carbon, *J. Chem. Phys.* 28 (1958) 9–11.
19. H. Hurzeler, M.G. Inghram, J.D. Morrison, Photon impact studies of molecules using a mass spectrometer, *J. Chem. Phys.* 28 (1958) 76–82.
20. J.S. Broadley, D.W.J. Cruickshank, J.D. Morrison, J.M. Robertson, H.M. Shearer, Three-dimensional refinement of the structure of β -succinic acid, *Proc. R. Soc. A* 251 (1959) 441–457.
21. J.D. Morrison, A.J.C. Nicholson, Probability of double ionization by electron impact for neon, argon and xenon, *J. Chem. Phys.* 31 (1959) 1320–1323.
22. F.H. Dorman, J.D. Morrison, A.J.C. Nicholson, Probability of multiple ionization by electron impact, *J. Chem. Phys.* 31 (1959) 1335–1337.
23. F.H. Dorman, J.D. Morrison, A.J.C. Nicholson, Threshold law for the probability of excitation by electron impact, *J. Chem. Phys.* 32 (1960) 378–384.
24. J.D. Morrison, H. Hurzeler, M.G. Inghram, H.E. Stanton, Threshold law for the probability of excitation by photon impact. A study of the photoionization efficiencies of Br₂, I₂, and CH₃I, *J. Chem. Phys.* 33 (1960) 821–824.
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Patents

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2. C.G. Enke, J.D. Morrison, R.A. Yost, Canadian Patent 1,117,224, "Tandem quadrupole mass spectrometer for selected ion fragmentation studies and low energy collision induced dissociator therefor", 26 January 1982.