



OFFICE OF THE SECRETARY  
OF THE FACULTIES

TUFTS UNIVERSITY

MEDFORD  
MASSACHUSETTS 02155

RESOLUTION ON THE RETIREMENT OF  
THOMAS R. P. GIBB, JR.  
ADOPTED BY THE FACULTY OF ARTS AND SCIENCES OF  
TUFTS UNIVERSITY  
May 4, 1981

Tom Gibb received his undergraduate education at Bowdoin College, with majors in physics and chemistry. He obtained his Ph.D. in organometallic chemistry at the Massachusetts Institute of Technology, and stayed on at this institution for six years as Instructor and Assistant Professor of analytical and organic chemistry. While he was still a graduate student, he published his first scientific paper, in 1938, describing a solvent-extraction method. In his second year at MIT, he published the now classical text on "Optical Methods of Chemical Analysis". In addition to his involvement in academic research, he was active in consulting, which included work for the Manhattan Project. During 1946-51, Tom became Director of Chemical Research at Metal Hydrides, Inc., of Beverly, Mass., and entered a very active period of research in another area: heavy-metal hydrides and borohydrides. After several years in industry, he returned to academe, with an appointment of Associate Professor at Tufts in 1951. From that time until his retirement, he has contributed to the intellectual life of this University in many ways.

Tom's scientific career exhibits a versatility and diversity of effort which is accessible only to a talented scientist, and is all the more enviable today when narrow specialization is so often the norm. His years on the faculty at MIT were devoted to both analytical and organic research, and the effort at Metal Hydrides centered on syntheses of borohydrides as well as the thermodynamic properties of heavy-metal hydride systems. At Tufts, his earlier interest in the properties of metallic hydrides developed into the related areas of high-pressure thermodynamic studies, the characterization of the solidstate structure of metallic hydrides by x-ray diffraction, and the magnetic susceptibility of these systems as a function of composition. He may thus be said to have navigated the waters of all the areas of chemistry. His work on the chemistry of metallic hydrides gave him international recognition in this research area, and contributed significantly to fashioning it into the mature field that it has since become. Yet there remain at least two further areas of inquiry which Tom explored with his characteristic penchant for new directions. One, primarily carried out in connection with a sabbatical at the University of Florida in the group of Per-Olov Löwdin, was an elaboration of the Kimball electron-cloud model, a remarkably adroit attempt to cast the indeterminacy principle of quantum mechanics into a semi-classical

guise in the calculation of atomic properties. The other area of interest, which occupied him in the remaining years at Tufts, was surely an outgrowth of one of his long-standing avocations, sailing. Tom became interested in the application of analytical methods to oceanography, particularly the characterization of the properties of sea foam. In 1975, he organized a symposium in the Division of Analytical Chemistry of the American Chemical Society on this topic, a fitting document of his voyage into this area of inquiry.

As his career aptly demonstrates, Tom has taught in all of the formal areas of chemistry, except physical chemistry. While both organic and analytical chemistry were his metier in his first academic appointment, his teaching activity at Tufts was directed primarily toward analytical and inorganic chemistry. He developed new courses in Instrumental Analysis, Radiochemistry and intermediate inorganic chemistry. During the time that it became unfashionable, in the trendsetting chemical community of the time, to teach analytical chemistry at the intermediate and graduate level, Tom staunchly opposed this temporary vogue, and has since been wholly vindicated. The warmth and gratitude that his students have always felt toward him attest to his almost infinite patience in working with students, in both teaching and advising. Tom spent an extraordinary amount of time in advising and counseling students, and was always sensitive and attentive to their needs. His efforts in maintaining contact with alumni and retaining active interest in their professional careers were exemplary. Tom has always been an active member of the Tufts community, and has served on a number of internal committees, including the Academic Standing Committee, the Educational Policy Committee, the Graduate School Committee, and the Engineering Curriculum Committee. For many years, he was involved with the Tufts Yacht Club, and there exists the Tom Gibb Trophy, formally known as the Freshman Greater Boston Sailing Trophy, as an outgrowth of that association. His sense of intellectual camaraderie and his conviviality added greatly to the activities of the Faculty Club, and he participated actively in Phi Beta Kappa and Sigma Xi. *stopped*

Many of us will often recall with pleasure the gracious hospitality that Tom and his wife Jean so frequently provided, and the stimulation of his cultural interests, especially music. We salute him, as a colleague, for his humanity, for the unerring sense of perfectionism that guide his intellectual pursuits, and for the multifaceted contributions he has made to this University.

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