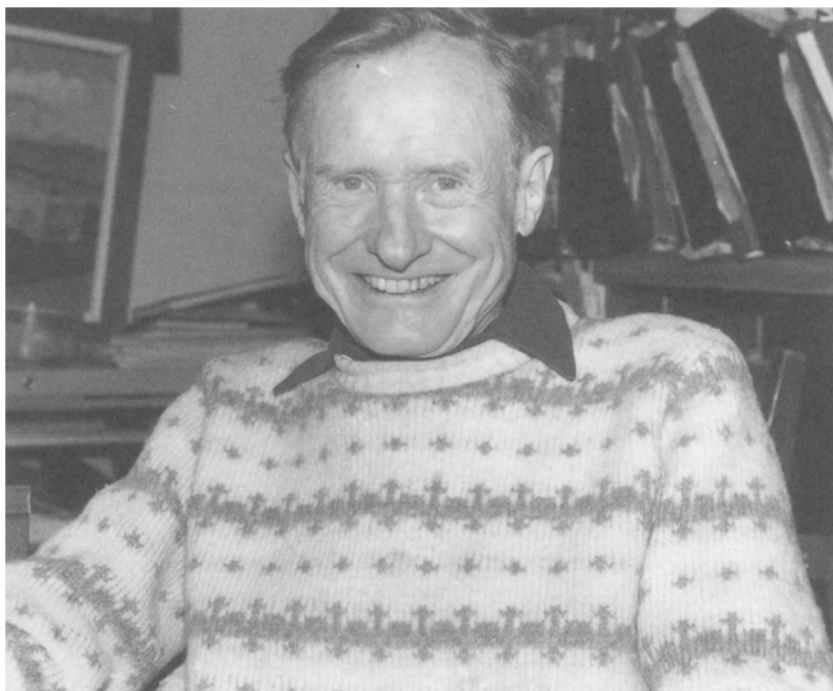


THE DONALD PATTERSON SYMPOSIUM ISSUE



Donald Patterson's 65th birthday was celebrated at a symposium in his honor at the 76th Congress of the Canadian Society for Chemistry held in Sherbrooke, Quebec, on May 31-June 3, 1993. This special issue of the *Journal of Solution Chemistry* contains many of the papers presented at that symposium.

It is appropriate to summarize briefly the most important steps in Donald's career and his contributions to the area of solution thermodynamics. Donald's first research efforts were made at the National Research Council of Canada with J. A. Morrison followed by an appointment to the Department of Chemistry at the University of Montreal in 1956. After a two-year stay in Strasbourg at the Research Center for Macromolecules, he returned to Montreal in 1966 to work at the Chemistry Department of McGill University.

His scientific career started in the area of polymer thermodynamics where he has made many substantial contributions. The cru-

cial role of free volume in polymer solutions and the discussion of the factors governing their phase diagrams and phenomena such as polymer-polymer compatibility are just a few examples of his achievements in this area. At a time when many researchers were moving towards the polymer field, Don's drive to understand polymer solutions at an even deeper level took him in the opposite direction and he started to study mixtures of small molecules. Since then, the area of small molecule thermodynamics has benefitted greatly from this counterflow movement by Donald. His experimental and theoretical work in the area have firmly established the importance of order or structural contributions to the thermodynamic functions of these apparently simple mixtures. As a result, Donald's name is currently linked to the concept of correlation of molecular orientations in pure long chain *n*-alkanes, to the understanding of association phenomena *via* H-bonding and to the study of non-randomness in solutions near their upper critical solution temperatures.

An examination of Don's contributions to polymer and small molecule thermodynamics leads to the conclusion that his scientific career is full of i's: insight, intuition, importance, ideas, imagination, inspiration, and intelligence. We have inherited (another i!) from him a remarkable body of knowledge which has inspired a great deal of the research done in the field. Don's publications always contain rich discussions of the physical significance of the data in the framework of several models and theories, some of which he has helped develop and popularize. His papers, always written using a clear pedagogical style, have not only explained and rationalized many data in the literature but have also been a continuous source of ideas for new experiments and theoretical developments. It is no exaggeration to say that at a time when, unfortunately, solution thermodynamics is considered "old fashioned" and "of limited value," Don's work has helped to keep the field alive by clearly showing its richness in putting forward many unanswered challenges in the area.

During his career Donald has had many students and collaborators from all around the world. Doing research with him is an exciting learning adventure where there is always something new to discuss, to speculate on, and to test in the laboratory. One of the great joys of working with Don is to enter his office, that living proof of the existence of the second law of thermodynamics, and engage with him in a discussion of the data just gathered in the laboratory, or the paper just found in the library or the predictions of a theory. But life is much more than just work. And this is why we not only remember his scientific leadership

but also, and perhaps more intensively, his human warmth and quality. Always interested in everybody's feelings, thoughts and opinions, Donald developed close personal relations with his students and collaborators. (He started by marrying Genevieve, his first graduate student!) But, of course, no one is perfect. Donald suffers from an incurable allergy to the spotlight which makes him constantly apply the "thermodynamic Merit function" $\Delta_D^o M$, where D stands for Donald and o for all others.

Because Donald truly believes that the enjoyment of doing research is in doing it with others and not alone; and because we all know he would like very much to see in print the names of those to whom he applied $\Delta_D^o M$, here is a list of names of those who have had the immense pleasure of working with him.

Lina Andreoli-Ball
 Michel Barbe
 Nathalie Barbe
 Harry Baikowitz
 Pierre Bataille
 Isabella Bassignana
 Hadda Bendiab
 Jan Biros
 Jean-Marie Bardin
 Sailen Bhattacharyya
 Mercedes Caceres
 Melvin Croucher
 Miguel Costas
 Genevieve Delmas
 Dinkar Deshpande
 Vladimir Dohnal
 David Dreifus
 Daniel Gaeckle
 William Kwang
 Bengt Kronberg
 Kyoji Nishikawa

Silvia Perez-Casas
 Pierre Paquet
 Julda Pouchly
 Dominique Richon
 Andree Robard
 Thomas Somcynsky
 John Smith
 Kok-Siong Siow
 C. S. Su
 Pierre de St. Romain
 Marie-Esther St. Victor
 S. J. Sun
 Pierre Trancede
 Huu Tra Van
 Andzrej Treszczanowicz
 Arturo Trejo
 Luis Miguel Trejo
 Yadu Tewari
 Zutao Yao
 Leos Zeman