



INTERNATIONAL UNION OF  
PURE AND APPLIED CHEMISTRY

Advancing Worldwide Chemistry

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*An Ontology on Property - For Physical, Chemical and Biological Systems*

The International Union of Pure and Applied Chemistry is pleased to announce the availability of an electronic version of Dr René Dybkær's seminal book "An Ontology on Property for Physical, Chemical and Biological Systems" <<http://ontology.iupac.org>>. This treatise presents the author's analyses and thinking through some 40 years on the theory of laboratory procedures. It is an ontology in the sense of Hegel, i.e. a combination of logic and metaphysics, clarifying and giving coherence to concepts in the laboratory domain from physical, chemical and biological points of view. The reader is taken on excursions into philosophy and history of science, in preparation of the main tour into metrology and terminology. The text is written with the formidable attention to detail and correctness which characterizes its author. These properties may well turn out to ensure a perhaps small but long lasting readership. It has been reviewed and acclaimed by authorities in analytical chemistry, laboratory medicine and metrology - the science of measuring.

The present second edition that is now e-published by IUPAC includes the progress in formal metrology as laid down in the 3rd edition of the International vocabulary of metrology --- Basic and general concepts and associated terms (VIM) (BIPM < [www.bipm.org](http://www.bipm.org)>). It gives a logical and detailed explanation of concepts that are fundamental to understand measurements, assumptions and conclusions in metrology. The e-publication of Dr Dybkær's work is indeed very timely also because there is a pressing need for sound foundations for standards for laboratory IT- application in all fields of science and particularly in the communication within electronic health care information systems and their global connectivity.

IUPAC has a leading, world-wide role in providing communication of clinical laboratory data together with its partners, the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and the International Health Terminology Standards Development Organisation ( IHTSDO) that owns SNOMED CT.



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### *About the Author*

René Dybkær was born in Copenhagen February 7, 1926. He graduated in medicine from the University of Copenhagen in 1951. Apart from some odd jobs in other specialties, he has devoted his professional and still active career to the domain "clinical laboratories". "Devoted", actually meaning devotee, that is, a zealous enthusiast. As such he has initiated, chaired, participated in, and contributed to a number of professional groups and organizations responsible for the development of laboratory medicine. In particular he chaired the Scientific Committee of IFCC; was chair of the IUPAC Commission on Nomenclature, Properties, and Units; and president of IFCC (the International Federation of Clinical Chemistry and Laboratory Medicine). René Dybkær is one of the leading authorities on terminology and is seen going back and forth between Copenhagen and BIPM (Paris) and other organizations dealing with fundamental issues in metrology.

A central theme for his scientific and organizational efforts is the net outcome and the presentation of the clinical laboratory work on properties of patients for use in diagnosis and treatment. His seminal publication from 1967: "Quantities and units in clinical chemistry" co-authored with Kjeld Jørgensen, established standards for written reports on laboratory results, which has markedly influenced daily practice in the Nordic countries and in several other countries as well. Among very important features the systematic approach will ensure that information gathered in a laboratory will be correctly transferred to the patients' records in the health information system.

Friends of René Dybkær know him as a man of numerous interests and talents. As a sportsman and national champion in epee fencing he may have developed the patience, elegance and tirelessness, which is typical of his performances in collaborative work. His sense of humor and modesty are other valuable assets. He likes music and has contributed on his clarinet in private settings. He has even utilized one hobby - philately - as a source of inspiration for a public performance: the opening address to an international congress in clinical chemistry on the role of laboratory science as a motive for stamps.

René Dybkær has received many expressions of appreciation from his peers, among others the Henry Wishinsky Distinguished International Service Award from IFCC (1993) for his outstanding contributions to the understanding of metrology in clinical chemistry and the James O. Westgard Quality Award (1998) for his long-lasting, patient and successful efforts to improve quality and cooperation in clinical chemistry worldwide.

*IUPAC was formed in 1919 by chemists from industry and academia. For more than 90 years, the Union has succeeded in fostering worldwide communications in the chemical sciences and in uniting academic, industrial and public sector chemistry in a common language. IUPAC is recognized as the world authority on chemical nomenclature,*

*terminology, standardized methods for measurement, atomic weights and many other critically evaluated data. More information about IUPAC and its activities is available at [www.iupac.org](http://www.iupac.org).*

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