

# *Curriculum Vitae*

## **Prof. Dr. phil. Dr. h.c. Emmerich WILHELM**

*Institute of Materials Chemistry & Research/Institute of Physical Chemistry  
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### **1) Personal Data**

Born in Wien (Vienna), Austria, on November 25, 1941, as the first son of Emmerich WILHELM, Sr., master hairdresser, and Rosa WILHELM. Married to Olga WILHELM (since 1968), one daughter: Katja Dagmar PRASCHL-BICHLER, née WILHELM, MBA (WU Wien/Vienna, University of Economics and Business).

### **2) Education**

**1947-1951:** Primary education: elementary school *Wittelsbach*, 1020 Wien, Austria.

**1951-1959:** Secondary education: science/mathematics-oriented high school (Gymnasium) *General Radetzky*, 1030 Wien. with leaving examination [*Matura/Abitur*: written examinations (obligatory in mathematics, descriptive technical geometry, English and German) and oral examinations in chemistry, philosophy/psychology and English] in June 1959.

**1959-1965:** Studies of *Chemistry, Physics* and *Philosophy* at the University of Wien, Austria, with degrees equivalent to **B.Sc.** and **M.Sc.**

**1965-1968:** Doctoral studies and PhD dissertation at the University of Wien in *Physical Chemistry: Calorimetric Determination of Molar Heat Capacities of Binary Nonelectrolyte Mixtures*. Mentor was Prof. Dr. F. Kohler, head of the *Chemical Physics Group*.

**1968/69:** Final oral doctoral examinations (*Rigorosen*) in Chemistry (*Physical Chemistry* and *Organic Chemistry*), in Physics (*Experimental Physics*) and in Philosophy (selected field: *Formal Logic*) in December 1968 and January 1969. **Dr. phil. (PhD)** received (*Promotion*) **January 31, 1969**.

### **3) Professional Experience**

**1966-1969:** Instructor, Institute of Physical Chemistry (IPC), U. Wien, Austria.

**1969-1971:** Senior Fulbright Research Associate, Chemistry Department, Wright State University (WSU), Dayton, Ohio, USA.

**1971-1979:** Assistant Professor, IPC, U. Wien, Austria.

**1979:** *Habilitation* (Physical Chemistry), U. Wien: *Universitäts-Dozent* (equivalent to Associate Professor).

**1979-1980:** Visiting Associate Professor, Chemistry Department, WSU, Dayton, Ohio, USA.

**1980:** Associate Professor *with tenure*, IPC, U. Wien, Austria.

**1988:** Ao. Professor, permanent title (for life) received from the *President of Austria*.

**1998-1999:** *Vice-Head/Vice-Chairman*, IPC, U. Wien, Austria.

**1999-2005:** *Head/Chairman*, IPC, U. Wien, Austria.

**2005-2007:** *Vice-Head/Vice-Chairman*, IPC, U. Wien, Austria.

**2007:** Retired **October 1<sup>st</sup>**. *Continuing* teaching contracts for courses (Master and PhD level) centered on fields covered by the *Institute of Materials Chemistry & Research* and the IPC, e.g.

(1) summer semester 2019: *Estimation of physicochemical properties*; (2) winter semester 2019/20: *Chemical thermodynamics of nonelectrolyte mixtures*.

### **4) Additional Professional Activities and Services**

#### ***Research/teaching positions (short term):***

**1975:** *Visiting Scientist*, University of Veszprém, Hungary.

**1975-2005:** Repeated *sabbaticals* in France (about 2-3 months/year) as *Visiting Senior Scientist*, first at the *Centre de Microcalorimétrie et de Thermodynamique* (CRMT/CNRS), Marseille, France (1975-77) and since 1978 at the *Université Blaise Pascal*, Clermont-Ferrand, France; altogether about **6 years**. During all these years, the collaborative research was *continuously* funded via consecutive bilateral peer-reviewed

research grants within the Austrian-French Program on Scientific-Technical Cooperation (it was the *longest* funded collaboration ever!).

- 1978:** *Visiting Senior Scientist*, Polish Academy of Sciences, Warsaw, Poland.  
**1980:** *Visiting Senior Scientist*, University of Veszprém, Hungary.  
**1984:** *Visiting Professor*, Université Blaise Pascal, Clermont-Ferrand, France.  
**1995:** **Summer semester:** *Visiting Professor*, Physical Chemistry, University of Salzburg, Austria.  
**1996:** **Summer semester:** *Visiting Professor*, Physical Chemistry, University of Salzburg, Austria.

***Membership in associations or institutions (with offices held) or editorial boards:***

- 1971-1975:** *Secretary*, Chemisch-Physikalische Gesellschaft, Wien, Austria.  
**1976-1981:** *Founding Member* of the *Editorial Board* and *Topic Editor*, **Solubility Data Series (IUPAC)**.  
**1977-2001:** *Associate Member*, and/or *National Representative*, and/or *Member*, *Subcommittee on Gas Solubilities*, IUPAC Commission V.8: Solubility Data.  
**1977-1995:** *Founding Member* of the *Editorial Board*, **Fluid Phase Equilibria**.  
**1979-1984:** *Member*, Chemical Thermodynamics Advisory Group of the National Research Council of Germany (DFG).  
**1984-1988:** *Member* of the *Editorial Board*, **Materials Chemistry and Physics**.  
**1985-1993:** *Associate Member*, IUPAC Commission I.2: Thermodynamics.  
**1987–** : *Member*, Commission of Experts, Chemical Society of Austria (GÖCh).  
**1990-1994:** *Member* of the *Editorial Board*, **International DATA Series, Series A**.  
**1992-1995:** *Vice-President*, European Society of Applied Physical Chemistry.  
**1993-2003:** *Member* of the *Editorial Board*, **Thermochemica Acta**.  
**1994-2001:** *Member* of the *Committee on Legendre Transforms in Chemical Thermodynamics* (IUPAC Commission I.2).  
**1995-2000:** *Member* of the *Editorial Board*, **ELDATA: The International Electronic Journal of Physico-Chemical Data**.  
**1996-2001:** *Member* of the *Board of Directors*, European Society of Applied Physical Chemistry.  
**1997-1999:** *Member* of the *Board of Directors*, US Calorimetry Conference.  
**1999-2003:** *Member*, IUPAC-CODATA Commission IUCOSPED.  
**2001–** : *Secretary General and Treasurer*, European Society of Applied Physical Chemistry.  
**2001–** : *Council Member*, International Council on Materials Education.  
**2004-2006:** *Member* of the *Board*, Chemisch-Physikalische Gesellschaft, Wien, Austria.  
**2006–** : *Member* of the *Board of Directors*, US Calorimetry Conference.  
**2010:** IUPAC *Fellow*.

***Member of organizing committees/co-organizer of the following 26 conferences or symposia:***

- 1973:** 3<sup>rd</sup> International Conference on Chemical Thermodynamics (IUPAC), Baden near Vienna, Austria.  
**1984:** 3<sup>rd</sup> Summer School on *Physics of the Liquid State*, St.Georgen, Carinthia, Austria.  
**1990:** 12<sup>th</sup> European Conference on Thermophysical Properties, Wien, Austria: *Organizer*, Section on *Liquids and Gases*.  
**1992:** 12<sup>th</sup> International Conference on Chemical Thermodynamics (IUPAC), Snowbird, Utah, USA: *Co-Organizer* (with Profs. E. Woolley & G. Maurer), Symposium on *New Methods and Instrumentation*.  
**1993:** 1<sup>st</sup> Symposium on Pharmacy and Thermal Analysis (PhandTA 1), Freiburg/Br., Germany.  
**1997:** 3<sup>rd</sup> Symposium on Pharmacy and Thermal Analysis (PhandTA 3), Ascona, Monte Verità, Centro Stefano Franscini, Switzerland.  
**1998:** European Molecular Liquids Group: Annual Conference 1998, *Physics of Liquids: Foundations, Highlights, Challenges*, Murau, Styria, Austria, *Co-Organizer* (with Profs. H. Posch & J. Fischer).  
**1999:** 4<sup>th</sup> Symposium on Pharmacy and Thermal Analysis (PhandTA 4), Karlsruhe, Germany.  
**2000:** 5<sup>th</sup> Symposium on Pharmacy and Thermal Analysis (PhandTA 5), Basel, Switzerland.  
**2001:** 56<sup>th</sup> Calorimetry Conference, Colorado Springs, Colorado, USA: *Co-Organizer* (with Prof. J.-P. E. Grolier), Symposium on *Solution Thermodynamics*.  
**2002:** (1) 6<sup>th</sup> Symposium on Pharmacy and Thermal Analysis (PhandTA 6), Ascona, Monte Verità, Centro Stefano Franscini, Switzerland.  
 (2) 17<sup>th</sup> International Conference on Chemical Thermodynamics (IUPAC), Rostock, Germany: *Co-Organizer*, Symposium on *Electrolyte Solutions and Non-Electrolyte Mixtures Including Reactive Systems*.  
**2003:** 7<sup>th</sup> Symposium on Pharmacy and Thermal Analysis (PhandTA 7), Innsbruck, Austria.

- 2004:** 8<sup>th</sup> International Conference on Pharmacy and Applied Physical Chemistry (PhandTA 8), Ascona, Monte Verità, Centro Stefano Franscini, Switzerland.
- 2006:** (1) Special Symposium in honor of Prof. J.-P. E. GROLIER (70<sup>th</sup> birthday) in conjunction with the 37<sup>èmes</sup> JCAT, Pau, France, June 2: *Organizer* (with assistance of Profs. Bessières, Daridon and Randzio).  
(2) **THERMO International 2006** (19<sup>th</sup> ICCT + 61<sup>st</sup> CALCON + 16<sup>th</sup> STP), Boulder, Colorado, USA, July 30 - August 4: *Co-Organizer* (with Prof. J.-P. E. Grolier), Symposium on *Electrolyte and Non-Electrolyte Solution Thermodynamics*.  
(3) 9<sup>th</sup> International Conference on Pharmacy and Applied Physical Chemistry (PhandTA 9), Düsseldorf, Germany, September 10 - 13.
- 2007:** (1) 62<sup>nd</sup> Calorimetry Conference, Turtle Bay Resort, Oahu/Hawaii, USA, August 5 - 10: *Co-Organizer* (with Prof. J.-P. E. Grolier), Symposium on *Solution Calorimetry (Including General and High Temperature Aqueous Solutions)*.  
(2) 10<sup>th</sup> International Conference on Pharmacy and Applied Physical Chemistry (PhandTA 10), Ascona, Monte Verità, Centro Stefano Franscini, Switzerland, October 21 – 24.
- 2008:** 63<sup>rd</sup> Calorimetry Conference, Jersey City, New Jersey, USA, July 2 – 6: *Co-Organizer* (with J.-P. E. Grolier), Symposium on *Solutions and Fluid Mixtures*.
- 2010:** (1) 11<sup>th</sup> International Conference on Pharmacy and Applied Physical Chemistry (PhandTA 11), Innsbruck, Austria, February 7 – 10.  
(2) 21<sup>st</sup> International Conference on Chemical Thermodynamics (IUPAC & IACT), Tsukuba Science City, Ibaraki, Japan, August 1 – 6: *Co-Organizer* (with H. Ogawa), Symposium on *Fluids and Fluid Mixtures (Solutions)*.
- 2012:** 12<sup>th</sup> International Conference on Pharmacy and Applied Physical Chemistry (PhandTA 12), Graz, Austria, May 6 – 9.
- 2013:** 68<sup>th</sup> Calorimetry Conference, Atlantic City, New Jersey, USA, August 18 – 22: *Co-Organizer* (with J.-P. E. Grolier), Symposium on *Aqueous Solutions, Fluid Mixtures and Polymers – A Tribute to Robert H. Wood on the Occasion of His 80<sup>th</sup> Birthday*.
- 2014:** 69<sup>th</sup> Calorimetry Conference, Santa Fe, New Mexico, USA, July 6 – 10: *Organizer*, Symposium on *Aqueous Solutions, Fluid Mixtures and Polymers*.
- 2016:** 71<sup>st</sup> Calorimetry Conference, Turtle Bay, Oahu, Hawaii, USA, July 31 – 16: *Co-Organizer* (with J.-P. E. Grolier and H. Ogawa), Symposium on *Liquid Solutions over Extended Ranges of Temperature and Pressure*.

**Member, International Advisory Committee:**

- 2017:** 8<sup>th</sup> International & 10<sup>th</sup> Japan-China Joint Symposium on Calorimetry & Thermal Analysis (CATS 2017), Fukuoka, Japan.

**Editor:**

- 2010:** *Co-Editor*, together with Prof. T.M. Letcher, UK, of a *monograph* on **Heat Capacities: Liquids, Solutions and Vapours**; published by the *Royal Society of Chemistry/IUPAC & IACT*, Cambridge, UK, 524 pages.
- 2014:** *Co-Editor*, together with Prof. T.M. Letcher, UK, of a *monograph* on **Volume Properties: Liquids, Solutions and Vapours**; published by the *Royal Society of Chemistry/IUPAC & IACT*, Cambridge, UK, 642 pages.
- 2018:** *Co-Editor*, together with Prof. T.M. Letcher, UK, of a *monograph* on **Enthalpy and Internal Energy: Liquids, Solutions and Vapours**; published by the *Royal Society of Chemistry/IACT*, Cambridge, UK, 618 pages.

**Guest Editor for special issues of:**

- 1989:** *Fluid Phase Equilibria*, **Vols. 48** and **49**: *special issues* on the occasion of *Prof. Friedrich Kohler's 65<sup>th</sup> birthday*; *Co-Editor* together with Prof. J. Fischer (then Ruhr-Universität Bochum, Germany).
- 1995:** *Thermochimica Acta*, **Vol. 259/1**: *special issue* on *Topics in Chemical Thermodynamics* (13<sup>th</sup> ICCT).

**External referee for:**

- (a) **16** international scientific journals, (b) **6** research funding agencies or foundations, and (c) **12** universities (PhD dissertations and/or faculty appointments) or research institutions. In particular, in 2010 I was external evaluator of the candidates for a professorial position “*Chemie und Physik der Materialien*”, University of Salzburg, Austria.

- (a) *Advances in Thermodynamics*  
*Berichte der Bunsen-Gesellschaft für Physikalische Chemie*  
*Chemical Physics Letters*  
*Chirality*  
*Chromatographia*  
*Fluid Phase Equilibria*  
*Industrial & Engineering Chemistry Research*  
*International Journal of Thermophysics*  
*Journal of Chemical and Engineering Data*  
*Journal of Molecular Liquids*  
*Journal of Physical Chemistry*  
*Journal of Solution Chemistry*  
*Journal of Thermal Analysis and Calorimetry*  
*Monatshefte für Chemie*  
*Thermochimica Acta*  
*Zeitschrift für Physikalische Chemie*
- (b) Austrian Ministry of Science and Research, Austria  
 National Research Council of Germany (DFG), Germany  
 Natural Sciences and Engineering Research Council of Canada (NSERC), Canada  
 Petroleum Research Fund, American Chemical Society, USA  
 International Science Foundation (Soros Foundation), Washington, D.C., USA  
 Fondazione Eni Enrico Mattei (ENI Award), Milano, Italy
- (c) Technische Universität Wien, Wien (Vienna), Austria  
 Paris-Lodron-Universität Salzburg, Salzburg, Austria  
 ECHEM Centre of Competence in Applied Electrochemistry, Wiener Neustadt, Austria  
 Karls-Universität, Prag, Czech Republic  
 Università di Bari, Bari, Italy  
 Université Blaise Pascal, Clermont-Ferrand, France  
 University of Turku, Turku, Finland  
 Wright State University, Dayton, Ohio, USA  
 Southern Methodist University, Dallas, Texas, USA  
 University of Melbourne, Parkville, Victoria, Australia  
 Sri Krishnadevaraya University, Anantapur, India  
 University of Karachi, Karachi, Pakistan

**Member of:**

Deutsche Bunsen-Gesellschaft für Physikalische Chemie  
 Gesellschaft für Thermische Analyse (GEFTA)  
 Gesellschaft Österreichischer Chemiker (GÖCh)  
 Chemisch-Physikalische Gesellschaft (CPG), Wien  
 Fulbright Society, Wien  
 Calorimetry Conference, USA

**Honors and Honorary Societies:**

- 1983–** : Member of *Sigma Xi, The Scientific Society*.  
**1991:** *Felix-Kuschenitz Award* (thermophysics): *Austrian Academy of Sciences*, Wien, Austria.  
**2002:** *Huffman Award: Calorimetry Conference*, USA.  
**2005:** *Huffman Award Legacy/Golden Anniversary* (60<sup>th</sup> Calorimetry Conference at NIST, Gaithersburg, MD, USA): *In Recognition of Lifelong Research Contributions to the Advancement of Thermochemistry and Thermodynamics*.  
**2006:** *Doctor Honoris Causa*, *Université Blaise Pascal*, Clermont-Ferrand, France.

**Biography has been included in:**

Kürschners Deutscher Gelehrten-Kalender  
 Who is Who in the World  
 Who is Who in Thermal Analysis and Calorimetry, I. M. Szilágyi and G. Liptay, Editors, Springer International Publishing, 2014.

## 5) Teaching (University of Wien, during the last 15 years)

Physical Chemistry I: Introduction (junior level); terminated 2006/7

Physical Chemistry II: Chemical Thermodynamics (senior level); terminated 2007/8

Physical Chemistry V: Structure of Matter (senior level); terminated 2007/8

Physical Chemistry VIII: Statistical Thermodynamics (senior level); terminated 2006/7

Physical Chemistry of Liquids and Gases (graduate/PhD-level course), occasionally given

Physical Chemistry at High Pressures (graduate/PhD-level course), occasionally given

Supercritical Fluids (graduate/PhD-level course), occasionally given

**Estimation of Physicochemical Properties (graduate/PhD-level course), every summer semester**

**Chemical Thermodynamics of Nonelectrolyte Mixtures (graduate/PhD-level course), every winter semester**

Introductory Physical Chemistry Laboratory (senior level); terminated 2006/7

Advanced Physical Chemistry Laboratory (graduate level); terminated 2006/7

Seminars on Physical Chemistry and Applied Statistical Physics (graduate/PhD-level):

(a) *Advances in Physical Chemistry* (with P. Rogl); terminated 2006/7;

(b) *ASPUS – Angewandte Statistische Physik und Simulation* (with H. Posch, M. Neumann, F. Vesely, Ch. Dellago), terminated 2013.

## 6) Publications

More than **180** articles published in peer reviewed scientific journals and book contributions; **3** books edited (with T. M. Letcher, UK) and published by the *Royal Society of Chemistry*, UK; more than **200** abstracts or short summaries for oral conference presentations (invited and regular) and for poster presentations at conferences.

## 7) Patent

Vorrichtung zur Wasserrückgewinnung: AT 518169 B1 2017-08-15.

## 8) Lectures

**129** Plenary Lectures/Keynote Lectures/Invited Lectures in Europe, USA/Canada, Brazil, Japan and China.

**90** Lectures at international scientific conferences in Europe, USA/Canada, Brazil, Japan and China.

Lecturer at all three **Summer Schools Physics of Liquids** in St. Georgen/Carinthia, Austria, **1972**, **1977**, and **1984**.

**In addition**, numerous lectures and posters on collaborative work have been presented by my collaborators at national and international scientific conferences. For instance, in the summer of 2011, we had 4 posters: two at the *ICAVS 6*, California, USA, 12 – 17 June 2011; one at the *lmc8*, Wien, Austria, 6 – 10 September 2011; and one at the *EMLG/JMLG 2011*, Warsaw, Poland, 11 – 15 September 2011.

## 9) Research Projects and International Cooperations (status since 1996)

### Projects:

**1996-1999:** FWF project P11003-PHY, with *Prof. Dr. H. Posch* and *Prof. Dr. M. Neumann* (then both at the Institute of Experimental Physics, University of Wien, Austria).

**1998-1999:** Scientific-Technical Project 16j/97 AUSTRIA/France (AMADÉE): Successor of a 20-years cooperation (continuously funded) with *Prof. Dr. J.-P. E. Grolier*, Université Blaise Pascal, Clermont-Ferrand, France.

**2001-2002:** Scientific-Technical Project V.15 AUSTRIA/France (AMADÉE).

**2004-2005:** Scientific-Technical Project Nr. 22/2004 AUSTRIA/France (AMADÉE).

**2006-2008:** Austrian Research Centers GmbH – ARC Projekt 1.44.00218.00, Expert: *Experimentelle Untersuchungen zur Bewertung von Wasserbehandlungsmethoden in Hinblick auf ihre Wirksamkeit*.

### Active scientific cooperations with:

Prof. A. Asenbaum, U. Salzburg/Wien, Austria

Prof. J.-P. E. Grolier, U. Blaise-Pascal, Clermont-Ferrand, France

Prof. R. Battino, Wright State U., Dayton, Ohio, USA

Prof. T. R. Rettich, Illinois Wesleyan U., Bloomington, Illinois, USA

Prof. T. Takagi, KIT, Kyoto, Japan

Prof. S. L. Randzio, Polish Academy of Sciences, Warsaw, Poland

Prof. M. Chorazewski, University of Silesia, Katowice, Poland

Until now more than 80 collaborators (including post-docs and research students) from 18 countries.