

# ANGEWANDTE CHEMIE

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## 40 Years of *Angewandte Chemie* International Edition

The cover picture of this anniversary issue marks the start of the fortieth year of the International Edition of *Angewandte Chemie*. “Publishing is like mountaineering” was a thought I had when I first saw this picture. I probably thought more of the effort of the ascent than the joy one experiences on reaching the peak. However, just like the climber who finds contentment, if not actually enjoyment, at every step of the preparation and the climb, the same is also true for all those involved in the stages of publication of books and journals.

In 1961, the plan to produce an English version of a German scientific journal was farsighted and courageous. The project had, to use the imagery above, Himalayan dimensions, not least because at that time there was not inconsiderable opposition from German-speaking chemists. The plan was put forth and realized essentially by two former editors of the journal, Wilhelm Foerst and Helmut Gr  newald. In 1961 *Angewandte Chemie* appeared every two weeks and contained the sections: Reviews, Communications, Conference Reports, Literature Abstracts, and Book Reviews. With the exception of a few excellent Reviews from abroad, all the articles came from the German-speaking community. Even at this time the spectrum of topics covered was broad and varied, something that is still one of the trademarks of the journal. What could be more topical today than the first review in issue 1 of the International Edition by G. Schramm et al. from T  bingen on the “Non-Enzymatic



Synthesis of Polysaccharides, Nucleosides and Nucleic Acids and the Origin of Self-Reproducing Systems”? Table 1 gives an overview of the reviews in the first year (1962). The list reflects the quality of the journal at the time in that many of the author’s names are very familiar and have even found their way into textbooks. Early in 2002 we are planning to publish a 40-year review index as a special issue of *Angewandte Chemie*.

Changes in the terrain and the weather require swift but considered reactions from the climber. Editors and publishers must react with similar speed and consideration to changes in the research landscape and the publishing business. *Angewandte Chemie* reacted resolutely at the start of the 1960s and since then, through a series of developments and innovations (Table 2) has contributed considerably to enhancing the visibility, attractiveness, and accessibility of excellent scientific content to a worldwide interdisciplinary readership. Two of the many changes were the introduction of an extended Table of Contents with graphical material 25 years ago and the Highlights section a decade ago.

Ten years of Highlights is also a small anniversary. These short articles which can range from a minireview to a detailed critical appraisal of just one particularly important research result (and everything in between), and which have in no way detracted from the importance of the longer traditional review articles, are used by readers to pinpoint key issues in chemis-



try. Many of the themes of the Highlights from 1991 (Table 3) have been dominant ones in the 1990s and are still of great importance today.

The year 2000 began with the “millennium issue”, the two reviews of which (from T. R. Cech and K. C. Nicolaou et al.) promptly entered the top ten articles most viewed electronically in Wiley InterScience; in addition this issue included the first article of a new section, Essays (about the early history of Ferrocene, written by P. Laszlo and R. Hoffmann). Essays provide a platform to address themes from every aspect of chemistry including the philosophy or history of science. Use of unpublished results from original research should be extremely limited. Primarily a known topic should be discussed illuminatingly and critically from a new vantage point.

The Essay in this issue aptly concerns *Angewandte Chemie* itself, and addresses an often controversially discussed topic, the impact factor. What do the Reviews contribute to the impact factor

of *Angewandte Chemie* and what do the Communications bring? Is the impact factor of *Angewandte Chemie* flawed through the publication of the

two editions? What are the results of a long-term citation analysis of individual articles? We are very grateful to the author, Werner Marx from the Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany, that he has taken such a close look at the impact factor of the journal. To increase curiosity about the Essay, Figure 1 shows the development of the impact factor of *Angewandte Chemie* along with those of two other well known chemistry journals since the beginning of this measurement scale. Most surprising (and pleasing) is that the impact factor for *Angewandte Chemie* climbed significantly in the second half of the 1990s although in this time the number of Communications, which are supposedly less cited than Reviews, greatly increased (Figure 2).

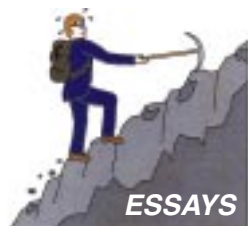


Table 1. Authors and Title of the Reviews in *Angewandte Chemie* in 1962.

Becke-Goehring, M., Fluck, E. Biemann, K.	Phosphonitrilic Chlorides from Phosphorus Pentachloride
Brill, R. Bunnett, J. F. Calvin, M. Criegee, R. Dachs, K., Schwartz, E.	The Application of Mass Spectrometry in Organic Chemistry: Determination of the Structure of Natural Products The Structure of Ice The Mechanism of Bimolecular $\beta$ -Elimination Reactions The Path of Carbon in Photosynthesis (Nobel Lecture) Attempts to Synthesize Tetramethylcyclobutadiene Pyrrolidone, Capryllactam and Lauro lactam as new Monomers for Polyamide Fibers Recent Studies on Fluoroalkyls and Related Compounds Long Periods in Drawn Polyethylene
Emel�us, H. J. Fischer, E. W., Schmidt, G. F. Graf, R. et al. Harteck, P., Reeves, R. R. Heine, H. W. Helfferich, F. Hinrichs, H., Niedetzky, J. Hofmann, U. Holtschmidt, H. Holtschmidt, H., Oertel, G. Hund, F. H�nig, S. J�chle, W. Jones, R. A. Y., Katritzky, A. R. K�brich, G. Kresze, G. et al. Kr�hnke, F., Zecher, W. K�hle, E. Kunin, R., Winger, A. G. Meerwein, H. et al. Muxfeldt, H. Neeb, R.	$\beta$ -Lactams, their Polymerization and Use as Raw Materials for Fibers Chemical Reactions in the Atmosphere The Isomerization of Aziridine Derivatives Theories of Ion-Exchange Column Performance: A Critical Study A New Type of Converter for Ammonia Synthesis The Chemical Basis of Ancient Greek Vase Painting High-Temperature Chlorination of Amines and Acylamines Isocyanates of Esters of Some Acids of Phosphorus and Silicon Mixed-Phase Pigments with Rutile Structures Heterocyclic Azo Dyes by Oxidative Coupling Biology and Biochemistry of Reproduction and Contraception Phosphorus Nuclear Magnetic Resonance Spectroscopy
Neumann, W., Fischer, P. Plesske, K.	Electrophilic Substitutions at Saturated Carbon Atoms Organic <i>N</i> -Sulfinyl Compounds Syntheses Using the Michael Addition of Pyridinium Salts Carbonic Acid Derivatives from Formamides Liquid Ion-Exchange Technology Ionic Hydrogenations and Dehydrogenations Syntheses in the Tetracycline Series Inverse Polarography and Voltammetry: New Methods for Trace Analysis
Plieninger, H. Randerath, K. Reichstein, T. Rinke, H. Rochlitz, F., Vilcsek, H. Smets, G. Smidt, J. et al. Smith, W. C. Sommer, L. H. Sprague, B. S. et al. Schlittler, E. et al. Schramm, G. et al.	The Preparation of Carbodiimides from Isocyanates Ring Substitutions and Secondary Reactions of Aromatic-Metal $\pi$ -Complexes Prephenic Acid: Properties and the Present Status of its Synthesis Thin-Layer Chromatography of Nucleotides Special Properties of the Sugars in Cardioactive Glycosides Elastomeric Fibers Based on Polyurethanes $\beta$ -Chloroethanephosphonic acid Dichloride: Its Synthesis and Use Chemical Reactions and Microtacticity of High Polymers The Oxidation of Olefins with Palladium Chloride Catalysts The Chemistry of Sulfur Tetrafluoride The Stereochemistry of Organosilicon Compounds Copolymers and Fibers from Vinylidenedicarbonyl Recent Developments in Non-Mercurial Diuretics Non-Enzymatic Synthesis of Polysaccharides, Nucleosides and Nucleic Acids and the Origin of Self-Reproducing Systems Automatic Activity Measurements during the Separation of Radioactive Compounds by Thin-Layer Chromatography Syntheses Using Heterocyclic Amides (Azolides) (New Methods of Preparative Organic Chemistry)
Schulze, P.-E., Wenzel, M.	Advances in the Chemistry of Organic Ring Systems with Adamantane Type Structures
Staab, H. A.	Nucleotide Intermediates in the Biosynthesis of Polysaccharides Conversion of Natural Substances by Microbial Enzymes
Stetter, H.	Reactivity of Dichloro- and Trichloropyrimidyl Dyes and the Sensitivity of their Dyeings to Hydrolysis
Strominger, J. L. Tamm, Ch. Thumm, O., Benz, J.	The $\alpha$ -Addition of Immonium Ions and Anions to Isonitriles Accompanied by Secondary Reactions (New Methods of Preparative Organic Chemistry)
Ugi, I.	The Synthesis of Nucleosides
Ulbricht, T. L. V. Vetter, K. J.	Problems in the Theoretical Treatment of Reactions Occurring at Easily Passivated Metal Anodes
Virtanen, A. I.	Some Organic Sulfur Compounds in Vegetables and Fodder Plants and their Significance in Human Nutrition
Voltz, J. Vossius, V. Walter, S. et al.	Dyeing of Poly(acrylonitrile) Fibers with Azatrimethinecyanines Patenting of Chemical Inventions in the Federal Republic of Germany Enrichment of Heavy Water by High Pressure Exchange between Hydrogen and an Aqueous Catalyst Suspension Aspects of Nucleophilic Carbene Chemistry
Wanzlick, H. W. Wieland, T., Pfeleiderer, G. Wittig, G. Zeil, W.	Isozymes and Heteroenzymes Small Rings with Carbon-Carbon Triple Bonds Mechanical and Dielectric Relaxation Phenomena and their Molecular-Physical Interpretation

Table 2. Changes and innovations at *Angewandte Chemie* over the last 25 years.

1976	Table of Contents with graphical abstract
1979	Changing cover picture, after around 1988 in color
1988	Founding of <i>Advanced Materials</i> in <i>Angewandte Chemie</i>
1991	Highlights
1992	Electronic journal editorial system
1995	Founding of <i>Chemistry - A European Journal</i> in <i>Angewandte Chemie</i> <i>Angewandte Chemie</i> Homepage: <a href="http://www.angewandte.com">www.angewandte.com</a>
1997	Full-page graphics for Reviews and Communications
1998	Regular press service
	Full-text on-line at <a href="http://www.interscience.wiley.com">www.interscience.wiley.com</a>
1999	Simultaneous publication of the German and International Editions
2000	Founding of <i>ChemBioChem</i> and <i>ChemPhysChem</i> in <i>Angewandte Chemie</i> Essays; Web editor; EarlyView (that is, the electronic publication of the issue in Wiley InterScience before the printed version)
2001	Color Table of Contents Web site reviews New editorial office system with on-line submission and refereeing over the WWW

Strong growth in various aspects has characterized *Angewandte Chemie* in the last five years. Figures 2–4 show the increase in Communications submitted, the growth in the number of pages published, and the increase in the number of Communications submitted from outside Germany. Figure 5 shows the origin of the Communications submitted in more detail. Last year alone, *Angewandte Chemie* received approximately 250 (ca. 15%) more Communications than in 1999 and 160 (23%) more were published—this is roughly as many as were published in the whole first volume of the International Edition (often four of them could be printed on one page in 1962). An enormous effort from the editors and the publisher—350 more pages (ca. 10%) were published than were planned—made a significant reduction of the publication time possible. At the start of 2000 the average publication time was still over 160 days but by the end of the year has been reduced to around 135 days; however, again last year particularly important and competitive work was published in less than two months, and this will be the case in the future. Publication time has different meanings to different journals. Not least because we do not want to put our authors at a disadvantage in cases of priority conflicts, our publication times are not manipulated in any way. Only if there is a very valid reason is the received date of the original manuscript not given. The publication time is the time between the date of receipt of the original manuscript and the publication date of the issue (the complete issue is published electronically about seven days before the printed version).

This reduction of publication times was made possible by various means including the publication of English Communications in the German Edition. Of 859 Communications in the last year, 498 were published in English alone and 361 in German and English. This change coupled with an expansion of the editorial staff should result in a further reduction of publication times in 2001.

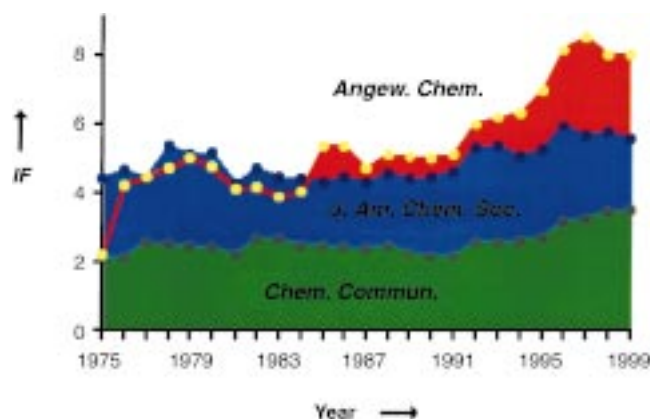


Figure 1. The development of the impact factor (IF) of *Chemical Communications*, the *Journal of the American Chemical Society*, and *Angewandte Chemie* since 1976.

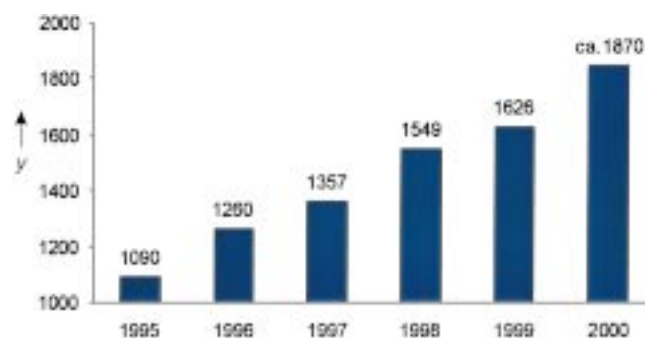


Figure 2. The increase in the number of Communications *y* submitted since 1995.

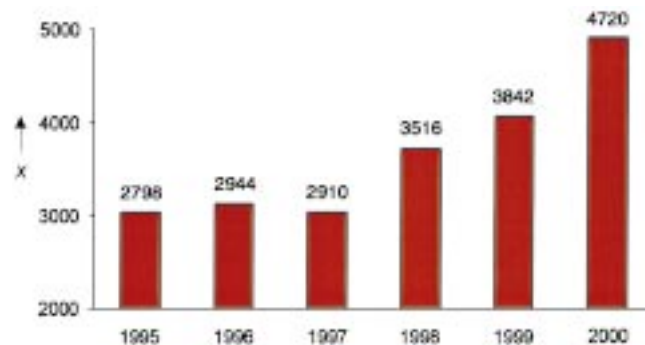


Figure 3. Increase in the number of pages published *x* of the German Edition of *Angewandte Chemie* since 1995. 4500 pages were planned for 2000 and 4900 were published; 5300 pages are planned for 2001.

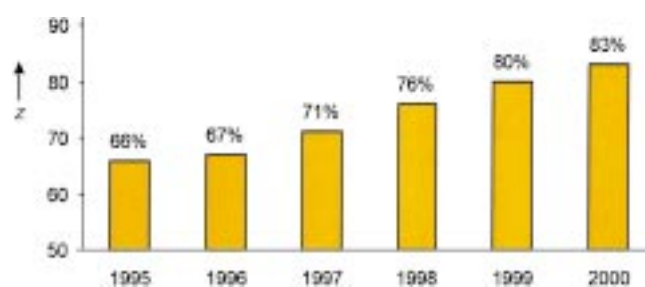


Figure 4. The number of Communications *z* submitted from outside Germany since 1995.



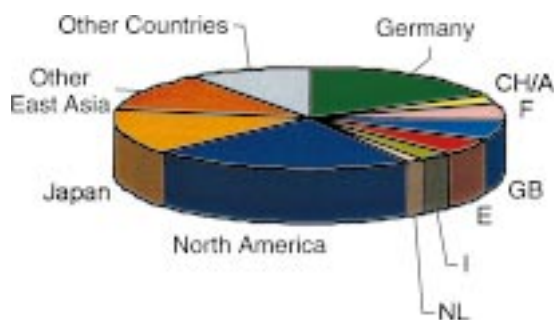


Figure 5. Origin of the Communications submitted to *Angewandte Chemie* 2000.

**C**olor in the Table of Contents: Clarity, liveliness, and visibility will be further enhanced in *Angewandte's* Table of Contents from 2001 through the sensible use of color. Our Table of Contents—a model for many other journals—was the first in chemistry to present graphical material with explanatory text. This has served our readers well for almost 25 years. In an ever more colorful (and noisy) world it is essential that we in-



Table 3. Authors and title of the Highlights in *Angewandte Chemie* 1991.

Alt, H. G.	Designed Coupling of $C_1$ Ligands: Organometallic Model Reactions
Beck, W.	Highly Reduced Metal Carbonyls
Bolm, C.	Bis(4,5-dihydrooxazolyl) Derivatives in Asymmetric Catalysis
Bolm, C.	Catalytic Enantioselective Epoxidations of Simple Olefins
Chisholm, M. H.	Metallenes and Metallaynes – from Small Molecules to Infinite Polymers
Constable, E. C.	Helices, Supramolecular Chemistry, and Metal-directed Self-Assembly
Constable, E. C.	Sandwiches Bring a New Element to Molecular Recognition
Diederich, F., Whetten, R. L.	$C_{60}$ : From Soot to Superconductors
Enkelmann, V.	Novel Building Blocks for the Synthesis of Organic Metals
Haarer, D., Kador, L.	Optical Detection of Single Molecules in a Solid A New Frontier in Optical Spectroscopy?
Heinze, J.	Ultramicroelectrodes – a New Dimension in Electrochemistry?
Herrmann, W. A.	Between Stars and Metals: Phosphorus Monoxide, PO
Hopf, H.	Incarcerated Atoms and Reactive Molecules
Kessler, H. et al.	Toward the Understanding of Immunosuppression
Kölle, U.	Energetic and Constitutional Hysteresis in Bistable Molecules
McBride, J. M., Carter, R. L.	Spontaneous Resolution by Stirred Crystallization
Mulzer, J.	Erythromycin Synthesis – A Never-ending Story?
Paetzold, P.	Monovalency of the Third Main-Group Elements: News from EX-Type Compounds
Plückthun, A., Ge, L.	The Rationality of Random Screening – Efficient Methods of Selection of Peptides and Oligonucleotide Ligands
Regitz, M.	Stable Carbenes – Illusion or Reality?
Ritter, H.	Novel Polymeric Materials from Monodisperse Copolypeptides by Biotechnological Methods
Schwarz, H.	Activation of Methane
Staunton, J.	The Extraordinary Enzymes Involved in Erythromycin Biosynthesis
Stoddart, J. F.	The Third Allotropic Form of Carbon
Süss-Fink, G.	Molecular Systems with Perfect Metal Structure
Vögtle, F., Knops, P.	Dyes for Visual Distinction between Enantiomers: Crown Ethers as Optical Sensors for Chiral Compounds
von Kiedrowski, G.	Light-Directed Parallel Synthesis of Up to 250 000 Different Oligopeptides and Oligonucleotides
Wachter, J.	New Discoveries in the Realm of Metal-Metal Multiple Bonds: $[\eta^5-C_5Me_5)_2Co_2]$ , the First Organometallic Multiple-Bond Complex without Bridging Ligands
Waldmann, H.	$LiClO_4$ in Ether – an Unusual Solvent
Wendorff, J. H.	Piezoelectric Liquid-Crystalline Elastomers

Table 4. The departing and new members of the Editorial Board of *Angewandte Chemie*.

#### Departing:

Prof. Gerhard Ertl, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin  
Prof. Arndt Simon, Max-Planck-Institut für Festkörperforschung, Stuttgart  
Prof. Günter Wulff, Heinrich-Heine-Universität, Düsseldorf

#### New:

Prof. Reinhart Ahlrichs, Universität Karlsruhe  
Prof. Martin Jansen, Max-Planck-Institut für Festkörperforschung, Stuttgart  
Prof. Rolf Mülhaupt, Albert-Ludwigs-Universität, Freiburg  
Prof. Martin Quack, Eidgenössische Technische Hochschule, Zürich  
Dr. Peter Raddatz, Merck KGaA, Darmstadt  
Prof. Bernd Wetzlar, Boehringer Ingelheim GmbH, Ingelheim am Rhein

crease the signal-to-noise ratio for the contributions we publish. We herewith encourage our authors to submit appropriate—not too large!—color graphical material that can be used in the Table of Contents. Reproduction will be free of charge in all cases where there is color in the article itself.

**W**hat else will 2001 bring? Many excellent and original manuscripts, naturally, that had not been published be it on preprint server or elsewhere. Three particularly attractive reviews stand at the beginning in this anniversary issue; the main authors were or are members of the Editorial Board or the International Advisory Board of *Angewandte Chemie*. It is the most important role of the members of these boards to mold the journal through excellent publications and thus demonstrate in which directions it should develop. The new and departing members of the Editorial Board are given in Table 4; there were no changes in the composition of the International Advisory Board.

**P**ublishing on the “Web” these days is a matter of course; 40 years ago this was unimaginable. For subscribers, *Angewandte Chemie* is fully accessible electronically ([www.interscience.wiley.com](http://www.interscience.wiley.com)). In addition, our Homepage ([www.angewandte.com](http://www.angewandte.com)) offers no end of interesting information (Hot Papers, Very Important Papers, Article Finder, Press Releases etc.). In the last few months, a Web editor has strengthened the editorial staff and has already made the Home-



page more attractive to viewers and will develop this further intensively. He will also oversee the new section "Web Sites" which can be found, for the very first time, at the end of this issue after the book reviews. Articles for this section are most welcome; prior contact with the editorial office is advisable (angewandte@wiley-vch.de). The reviewing of web sites should help readers to sift the wheat from the chaff in the web, no doubt there is already more trash than treasure out there!

**I**n the previous 40 years, more than a few issues have left the readers, authors, and editors with the feeling that they have conquered another mountain, and the current issue is also no insignificant peak. We are already looking forward to the next ones (dispel thoughts of Sisyphus) and thus to your contribution, whether it is for one of the sections in the journal or comments on this issue and the development of *Angewandte Chemie* in general.



Dr. Peter Göllitz

**PS:** Last year we began the ascent of new peaks with the founding of *ChemBioChem* and *ChemPhysChem*, and thanks to the magnificent support of the Editorial Board Members, great heights have been reached already. The response of the authors has been excellent, the two journals have both received nearly two hundred manuscripts in the first shortened year of publication, and the interest of the readers has been great. The new issues of *ChemBioChem* and *ChemPhysChem* will appear alternately at the end of each issue of *Angewandte Chemie* throughout the year.

