C. Griesinger

*The author presented on this page has recently published his **25th article** since 2000 in Angewandte Chemie:* "Is Enantiomer Assignment Possible by NMR Spectroscopy Using Residual Dipolar Couplings from Chiral Nonracemic Alignment Media?—A Critical Assessment": R. Berger et al., *Angew. Chem.* **2012**, *124*, 8512–8515; *Angew. Chem. Int. Ed.* **2012**, *51*, 8388–8391.

Christian Griesinger

Date of birth:	April 5, 1960
Position:	Director of the Department of NMR-based Structural Biology and Scientific Member of the Max Planck Institute for Biophysical Chemistry; Honorary Professor at the University of Göttingen
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Education:	1979–1984 Studies of chemistry and physics, University of Frankfurt 1984–1986 PhD with Horst Kessler, University of Frankfurt 1986–1989 Postdoctoral position with Richard R. Ernst, ETH Zürich
Awards:	**1998** Leibniz Prize of the Deutsche Forschungsgemeinschaft; **2003** Otto Bayer Prize; **2011** Elhuyar–Goldschmidt Prize of the Real Sociedad Española de Química and the Gesellschaft Deutscher Chemiker; **2012** Theodor Bücher Award Lecture
Current research interests:	Structural biology and relation to function, in particular the use of NMR spectroscopy in solution and in the solid state
Hobbies:	Reading, piano, biking, jogging, swimming, skiing, and scuba diving

My favorite book is … Doktor Faustus.

The natural talent I would like to be gifted with … being able to improvise on the piano.

My favorite quote is … "Wer immer strebend sich bemüht, den können wir erlösen" ("Whoever strives with all his might, that man we can redeem"; Goethe, Faust II).

If I could be any age I would be … 35, preferably for ever!

My biggest inspiration are … my students, postdocs, and colleagues.

My favorite time of day is … 5 am in summer, when wildlife is on the jogging trail and the birds are singing.

The secret of being a successful scientist is … the combination of being focused and at the same time able to spot the diamonds that need to be polished; dedicated and enthusiastic; frustration-tolerant and perseverant; crazy and rational; able to motivate students and co-workers and at the same time letting them do what they want; having huge ambitions because at some point in time, reality makes them come true.

My science "heroes" are … Horst Kessler and Richard Ernst.

What I appreciate most about my friends is … their frank opinions.

My favorite painter is … Hieronymus Bosch.

My favorite composer is … Beethoven.

My motto is … "Why do something boring if you can do something interesting?"

When I was eighteen I wanted to be … a chemistry professor.

Chemistry is fun because … you find out new things, you can even make them, and you are only inhibited by your own imagination.

Young people should study chemistry because … it is the most complete and most diverse science.

My favorite drink is … green tea in the morning, coffee during the day, and in the evening a caipirinha when I am in Brazil and malbec when I am in Argentina.

The most significant historic events of the past 100 years were … the destruction of the Third Reich and the uprising against communism.

If I could be anyone for a day, I would be … a scientist in 10000 years from now, and learn how all the big and small problems in science and society have been solved and what the new challenges are.

My first experiment was … to wire my twin brother to a device (Elektronik X-Labor) that flashed a little light bulb when his heart beat.

How has your approach to chemistry research changed since the start of your career?

I started as a methodological NMR spectroscopist in the group of Horst Kessler in 1983, with a focus on small molecules and peptides, shifted towards proteins as a postdoc in Richard Ernst's group, and concentrated on this even more when I started my independent career in Frankfurt. Since this time, I appreciate the scientific NMR community as an extraordinarily unbiased and intellectually immensely inspiring community with great minds. Today, in Göttingen, I also have the goal to develop and apply NMR methodology to answer questions in biophysics, biology, and we even venture into medicine.

How do you think your field of research will evolve over the next 10 years?

NMR spectroscopy is very diverse and gives answers from structure to catalytic mechanisms, is applicable to molecules of very different sizes, and has an impact in material sciences, life sciences, and physical (bio)chemistry. I expect that, more and more, NMR scientists will have to deliver research that communities other than NMR researchers appreciate. NMR will be developed to become more sensitive and provide better resolution. In combination with chemical and biochemical techniques, NMR will contribute to providing "movies" of (bio)chemical reactions and NMR will team up with other techniques, and even more examples of amazing insights from hybrid approaches are foreseeable.

My 5 top papers:

1. "Coherence Selection by Gradients without Signal Attenuation: Application to the Three-Dimensional HNCO Experiment": J. Schleucher, M. Sattler, C. Griesinger, *Angew. Chem.* **1993**, *105*, 1518 – 1521; *Angew. Chem. Int. Ed. Engl.* **1993**, *32*, 1489 – 1491.
   The sensitivity enhancement and suppression of artifacts in one of the most-used triple-resonance three-dimensional experiments applied to proteins is still used today in various experiments.
2. "Determination of the Orientation of a Distant Bond Vector in a Molecular Reference Frame by Cross-Correlated Relaxation of Nuclear Spins": B. Reif, H. Steinhagen, B. Junker, M. Reggelin, C. Griesinger, *Angew. Chem.* **1998**, *110*, 2006 – 2009; *Angew. Chem. Int. Ed.* **1998**, *37*, 1903 – 1906.
   The first reported application of cross-correlated relaxation of double- and zero-quantum coherences after its introduction by Reif et al. This paper even made it to the cover of *Angewandte*.
3. "A DMSO-Compatible Orientating Medium: Towards the Investigation of the Stereochemistry of Natural Products": P. Haberz, J. Farjon, C. Griesinger, *Angew. Chem.* **2005**, *117*, 431 – 433; *Angew. Chem. Int. Ed.* **2005**, *44*, 427 – 429.
   As a young chemist, I was infected by the chirality virus by Professor Quinkert and wanted to contribute to the elucidation of molecular configurations. Later it became clear that both small-molecule conformation AND configuration would be accessible if one could use residual dipolar couplings in anisotropic media compatible with DMSO.
4. "The INPHARMA Method: Protein-Mediated Interligand NOEs for Pharmacophore Mapping": V. M. Sánchez-Pedregal, M. Reese, J. Meiler, M. J. J. Blommers, C. Griesinger, T. Carlomagno, *Angew. Chem.* **2005**, *117*, 4244 – 4247; *Angew. Chem. Int. Ed.* **2005**, *44*, 4172 – 4175.
   A method to map sites for the binding of small molecules to target molecules that is easier and better to use when the target molecule is bigger. We are presently exploring how broadly applicable this method is for drug optimization.
5. "Kinetics of Conformational Sampling in Ubiquitin": D. Ban, M. F. Funk, R. Gulich, D. Egger, T. M. Sabo, K. F. A. Walter, R. B. Fenwick, K. Giller, F. Pichierri, B. L. de Groot, O. F. Lange, H. Grubmüller, X. Salvatella, M. Wolf, A. Loidl, R. Kree, S. Becker, N.-A. Lakomek, D. Lee, P. Lunkenheimer, C. Griesinger, *Angew. Chem.* **2011**, *123*, 11639 – 11642; *Angew. Chem. Int. Ed.* **2011**, *50*, 11437 – 11440.
   The time scale of interconversion within the ensemble of structures that ubiquitin adopts could be determined with atomic resolution to lie between 1 and 20 μs, thus contributing important information for obtaining a movie of proteins that recognize each other.

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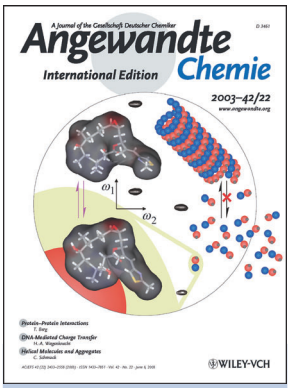

The work of C. Griesinger has been featured on the cover of Angewandte Chemie:
"The High-Resolution Solution Structure of Epothilone A Bound to Tubulin: An Understanding of the Structure – Activity Relationships for a Powerful Class of Antitumor Agents": T. Carlomagno, M. J. J. Blommers, J. Meiler, W. Jahnke, T. Schupp, F. Petersen, D. Schinzer, K.-H. Altmann, C. Griesinger, *Angew. Chem.* **2003**, *115*, 2615 – 2619; *Angew. Chem. Int. Ed.* **2003**, *42*, 2511 – 2515