

## Franz Hillenkamp: Curriculum Vitae

1. Present Title: Professor emeritus
2. Present Position: Member, Institute for Medical Physics and Biophysics, Medical Faculty, Westfälische Wilhelms Universität, Münster, Federal Republic of Germany
3. Personal:
  - Born: March 18, 1936; Essen, Germany
  - Married: 1963, three children
4. Address: Bahlmannstr. 5, D-48147 Münster, Federal Republic of Germany, Tel.: +49-251-8355103; e-mail: [hillenk@uni-muenster.de](mailto:hillenk@uni-muenster.de)
5. Education:
  - 1961 M.S.E.E., Purdue University, West Lafayette, Ind.
  - 1962 Diploma (Dipl. Ing., Communications), Technische Universität München, Germany
  - 1966 PhD (Dr.-Ing.), Technische Universität, München, Germany (Thesis: An Absolutely Calibrated Calorimeter for the Measurement of Pulsed Laser Radiation)
6. Academic Appointments:
  - 1963–1976 Part-time lecturer of Physics, University of Maryland, Munich Campus
  - 1976–1986 Professor of Biophysics, J.W. Goethe Universität, Frankfurt, Germany
  - 1982–1986 Professor, Medical Faculty, J.W. Goethe Universität, Frankfurt, Germany
  - 1986–2001 Professor of Biophysics and Medical Physics, Westfälische Wilhelms Universität, Münster, Germany
  - 1985– Visiting Professor, Harvard Medical School, Boston, MA, USA
  - 1986 Visiting Professor, Secondá Facoltà di Medicina, Università di Napoli, Italia
  - 1999 Visiting Professor, Texas A&M University, College Station, Texas
  - 2000 Visiting Professor, Universität Innsbruck, Austria
  - 2001– Professor emeritus, Westfälische Wilhelms Universität, Münster, Germany
7. Professional Appointments:
  - 1962–1963 Research Assistant, Institut für Strahlenbiologie (Institute for Radiation Biology), Universität München, Germany

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| 1963–1968 | Research Scientist, Gesellschaft für Strahlen- und Umweltforschung (National Laboratory for Radiation and Environmental Research), München, Germany |
| 1968–1976 | Deputy Head, Department of Coherent Optics, Gesellschaft für Strahlen- und Umweltforschung, Munich, Germany   |
| 1976–1986 | Research Consultant, Gesellschaft für Strahlen- und Umweltforschung, Munich, Germany  |
| 1985–     | Research Physicist, Massachusetts General Hospital, Boston, MA, USA   |
| 2001–     | Chief Consultant Mass Spectrometry, Sequenom Inc., San Diego, CA, USA   |
8. Other Scientific Appointments:
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| 1970–1976 | Scientific Coordinator of Research Project “Lasers in Medicine and Biology” of German Federal Department of Research and Technology |
| 1972      | Chairman, Symposium “Laser in der Medizin”, Munich  |
| 1977      | Chairman, Symposium “Laser in Medizin und Biologie”, Munich   |
| 1978      | Vice Chairman, Gordon Research Conference on Lasers in Medicine and Biology, USA  |
| 1979      | Scientific Director, NATO Advanced Study Institute on Lasers in Biology and Medicine  |
| 1980      | Chairman, Gordon Research Conference on Lasers in Medicine and Biology  |
9. Honors:
- 1997: Award for Distinguished Contributions in Mass Spectrometry of the American Society for Mass Spectrometry  
 April 2000: Award for “Molecular Bioanalytics” of the Deutsche Gesellschaft für Biochemie und Molekularbiologie (100.000 DM, sponsored by Roche Diagnostics) jointly with Prof. Michael Karas, Frankfurt  
 April 2001: Member, Academy of Sciences of the State of Northrhine Westfalia, Germany
10. Editorial Boards:
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| 1983–     | Member of Editorial Board, <i>Int. J. Mass. Spectrom.</i>           |
| 1984–     | Regional Editor (western Europe), <i>Laser in the Life Sciences</i> |
| 1990–     | Member, editorial board, <i>Zeitschrift für Medizinische Physik</i> |
| 1992–1995 | Member, editorial board, <i>Anal. Chem.</i>                         |
| 1993–     | Member, editorial board, <i>Acta Laser Biology Sinica</i>           |
| 1995–     | Member, editorial board, <i>Lasers Surg. Med.</i>                   |
| 1996–     | Member, editorial board, <i>Rapid Commun. Mass Spectrom.</i>        |
| 1997–2000 | Member, editorial board, <i>J. Am. Soc. Mass Spectrom.</i>          |

11. Major Research Interests:

1. Laser Mass Spectrometry

Laser mass spectrometry for microprobing inorganic ions and their subcellular distributions; desorption of large, nonvolatile, fragile bioorganic molecules out of the condensed phase by Matrix-Assisted Laser Desorption/Ionization. Nonequilibrium thermodynamics of desorption processes. Instrument development in laser mass spectrometry

The current research is concentrated in three related areas:

1. Methodological and instrumental development of MALDI with infrared lasers
2. Applications of MALDI-mass spectrometry in Genomic Analysis
3. Analyte–matrix interaction in MALDI mass spectrometry

2. Biophysics of nonionizing radiation

Biophysics of electromagnetic radiation in the ultraviolet, visible and infrared including interest in mechanisms of tissue interaction and practical use of such radiation. Some interest in low frequency electromagnetic radiation and microwave effects and ultrasound

3. Laser applications in Medicine and Biology

Biomedical laser applications, particularly mechanisms of laser tissue interaction. Laser interaction with the retina, and interaction with the transparent ocular media; endoscopic laser applications; spectroscopic laser applications in biomedicine. Clarification of basic interaction mechanisms and practical instrument developments