

PUBLICATIONS 1996**Book Chapters and Reviews**

- R.E. Davis, J.K. Whitesell, M.S. Wong and N.-L. Chang
"Molecular Shape as a Design Criterion in Crystal Engineering" *Chapter 3 in:*
"The Crystal as a Supramolecular Entity - Perspectives in Supramolecular Chemistry", Vol. 2,
(Editor :G.R. Desiraju), John Wiley & Sons Ltd. (1996)
- G. Montemezzani and P. Günter
"Inorganic and Organic Photorefractive Materials" in:
"Notions and Perspectives of Nonlinear Optics"
(Editor :Ole Keller), World Scientific, Singapore, 370-427 (1996)

Journal Publications

- I. Biaggio and G. Roosen
"Influence of Shallow Traps on the Enhancement of the Photorefractive Grating Amplitude by a High-Frequency Alternating Electric Field: a Probabilistic Analysis"
J. Opt. Soc. Am. B **13** (10), 2306-2314 (1996)
- Ch. Bosshard, R. Spreiter, M. Zgonik and P. Günter
"Cascaded Nonlinearities of Organic and Inorganic Single Crystals"
Nonlinear Optics **15**, 425-429 (1996)
- Ch. Bosshard, R. Spreiter, P. Günter, R.R. Tykwinski, M. Schreiber and F. Diederich
"Structure-Property Relationships in Nonlinear Optical Tetraethynylethenes"
Advanced Materials **8** (3), 231-234 (1996)
- Ch. Bosshard
"Cascading of Second-Order Nonlinearities in Polar Materials"
Advanced Materials **8** (5), 385-397 (1996)
- S. Brülisauer, D. Fluck, P. Günter, L. Beckers and Ch. Buchal
"Photorefractive Effect in Proton-Implanted Fe-Doped KNbO₃ Waveguides at Telecommunication Wavelengths"
J. Opt. Soc. Am. B **13** (11), 2544-2548 (1996)
- L.-A. de Montmorillon, I. Biaggio, Ph. Delaye, J.-C. Launay and G. Roosen
"Eye-Safe Large Field of View Homodyne Detection Using a Photorefractive CdTe:V Crystal"
Opt. Commun. **129**, 293-300 (1996)
- J. Dolinsek, D. Arcon, B. Zalar, R. Pirc, R. Blinc and R. Kind
"Quantum Effects in the Dynamics of Proton Glasses"
Physical Review B **54** (10), R6811-R6814 (1996)
- M. Duelli, R. Cudney and P. Günter
"Discrimination of Enclosed Images by Weighted Storage in an Optical Associative Memory"
Optics Communications **123**, 49-54 (1996)
- L. Eng, M. Friedrich, J. Fousek and P. Günter
"Deconvolution of Topographic and Ferroelectric Contrast by Noncontact and Friction Force Microscopy"
J. Vac. Sci. Technol. B **14** (2), 1191-1196 (1996)

- L. Eng, Ch. Seuret, H. Looser and P. Günter
"Approaching the Liquid/Air Interface with Scanning Force Microscopy"
J. Vac. Sci. Technol. B **14** (2), 1386-1389 (1996)
- L. Eng, M. Friedrich, J. Fousek and P. Günter
"Scanning Force Microscopy of Ferroelectric Crystals"
Ferroelectrics **186**, 49-52 (1996)
- L. Eng, F. Eng, Ch. Seuret, A. Kündig and P. Günter
"Inexpensive, Reliable Control Electronics for Stick-Slip Motion in Air and Ultrahigh Vacuum"
Rev. Sci. Instrum. **67** (2), 401-405 (1996)
- D. Fluck, T. Pliska and P. Günter
"Compact 10 mW All-Solid-State 491 nm Laser Based on Frequency Doubling a Master Oscillator Power Amplifier Laser Diode"
Optics Communications **123**, 624-628 (1996)
- D. Fluck, T. Pliska, P. Günter, L. Beckers and C. Buchal
"Cerenkov-Type Second-Harmonic Generation in KNbO₃ Channel Waveguides"
Journal of Quantum Electronics **32** (6), 905-916 (1996)
- D. Fluck and P. Günter
"Tunable Blue Light Generation by Sum-Frequency Mixing of AlGaAs and InGaAs Laser Diodes in KNbO₃"
Electronics Letters **32** (10), 901-903 (1996)
- D. Fluck, T. Pliska, P. Günter, St. Bauer, L. Beckers and Ch. Buchal
"Blue-Light Second-Harmonic Generation in Ion-Implanted KNbO₃ Channel Waveguides of New Design"
Appl. Phys. Lett. **69** (27), 4133-4135 (1996)
- S. Follonier, Ch. Bosshard, F. Pan and P. Günter
"Photorefractive Effects Observed in 4-N-Dimethylamino-4'-N'-Methyl-Stilbazolium Toluene-p-Sulfonate"
Optics Letters **21** (20), 1655-1657 (1996)
- S. Grafström, T. Blasberg and D. Suter
"Reflection Spectroscopy of Spin-Polarized Atoms Near a Dielectric Surface"
J. Opt. Soc. Am. B **13** (1), 3-10 (1996)
- S. Grafström and D. Suter
"Interaction of Spin-Polarized Atoms with a Surface Studied by Optical-Reflection Spectroscopy"
Physical Review A **54** (3), 2169-2179 (1996)
- S. Grafström and D. Suter
"Optically Enhanced Magnetic Resonance for the Study of Atom-Surface Interaction"
Z. Phys. D **38**, 119-132 (1996)
- Ph. Kaatz, Ph. Prêtre, U. Meier, Ch. Bosshard, P. Günter, B. Zysset, M. Stähelin, M. Ahlheim and F. Lehr
"Relaxation Processes in Nonlinear Optical Polyimide Side-Chain Polymers"
Nonlinear Optics **15**, 391-394 (1996)
- Ph. Kaatz, Ph. Prêtre, U. Meier, U. Stalder, Ch. Bosshard, P. Günter, B. Zysset, M. Stähelin, M. Ahlheim and F. Lehr
"Relaxation Processes in Nonlinear Optical Polyimide Side-Chain Polymers"
Macromolecules **29** (5), 1666-1678 (1996)

- C. Medrano, J. Hernández and H. Murrieta
"Luminescence and EPR Studies in KNbO₃ Doped Crystals"
Ferroelectrics **182**, 81-90 (1996)
- C. Medrano, M. Zgonik, P. Bernasconi and P. Günter
"Phase Conjugation in Optical Communication Links with Photorefractive Fe:KNbO₃"
Optics Communications **128**, 177-184 (1996)
- C. Medrano, M. Zgonik, I. Liakatas and P. Günter
"Infrared Photorefractive Effect in Doped KNbO₃ Crystals"
J. Opt. Soc. Am. B **13** (11), 2657-2661 (1996)
- F. Pan, M.S. Wong, V. Gramlich, Ch. Bosshard and P. Günter
"Crystal Engineering Based on Short Hydrogen Bonds; Cocrystallization of a Highly Nonlinear Optical Merocyanine Dye with Nitrophenol Derivatives"
Chem. Commun., 1557-1558 (1996)
- F. Pan, M.S. Wong, V. Gramlich, Ch. Bosshard and P. Günter
"A Novel and Perfectly Aligned Highly Electro-Optic Organic Cocrystal of a Merocyanine Dye and 2,4-Dihydroxybenzaldehyde"
J. Am. Chem. Soc. **118** (26), 6315-6316 (1996)
- F. Pan, M.S. Wong, Ch. Bosshard and P. Günter
"Crystal Growth and Characterization of the Organic Salt 2-N,N-Dimethylamino-4'-N'-Methyl-Stilbazolium Tosylate (DAST)"
Advanced Materials **8** (7), 592-595 (1996)
- F. Pan, G. Knöpfle, Ch. Bosshard, S. Follonier, R. Spreiter, M.S. Wong and P. Günter
"Electro-Optic Properties of the Organic Salt 4-N,N-Dimethylamino-4'-N'-Methyl-Stilbazolium Tosylate"
Appl. Phys. Lett. **69** (1), 13-15 (1996)
- F. Pan, Ch. Bosshard, M.S. Wong, C. Serbutoviez, S. Follonier, P. Günter and K. Schenk
"Polymorphism, Growth and Characterization of a New Organic Nonlinear Optical Crystal: 4-Dimethylaminobenzaldehyde-4-Nitrophenylhydrazone (DANPH)"
Journal of Crystal Growth **165**, 273-283 (1996)
- F. Pan, M.S. Wong, Ch. Bosshard, P. Günter and V. Gramlich
"Strong Hydrogen Bonds as a Design Element for Developing New Non-Linear Optical Crystals: Co-Crystals of Merocyanine Dyes and Phenol Derivatives"
Advanced Materials for Optics and Electronics **6**, 261-266 (1996)
- G. Ross, G. Montemezzani, P. Bernasconi, M. Zgonik and P. Günter
"Strong Ultraviolet Induced Absorption and Absorption Gratings in BaTiO₃"
J. Appl. Phys. **79** (7), 3665-3668
- A. Schreyer, L. Eng and H. Böhni
"In Situ Scanning Tunneling Microscope Investigation of Passivation and Stainless Steels and Iron"
J. Vac. Sci. Technol. B **16** (2), 1162-1166 (1996)
- C. Serbutoviez, Ch. Bosshard, S. Follonier, G. Knöpfle, F. Pan and P. Günter
"Nonlinear Optical Properties of Hydrazone Derivatives"
Nonlinear Optics **15**, 185-188 (1996)

- D.E. Spence, S. Wielandy, C.L. Tang, Ch. Bosshard and P. Günter
"High Average Power, High-Repetition Rate Femtosecond Pulse Generation in the 1-5 μm Region Using an Optical Parametric Oscillator"
Appl. Phys. Lett. **68** (4), 452-454 (1996)
- Ch. Weder, P. Neuenschwander, U.W. Suter, Ph. Prêtre, Ph. Kaatz and P. Günter
"New Polyamides with Large Second-Order Nonlinear Optical Properties"
Nonlinear Optics **15**, 395-398 (1996)
- Ch. Weder, M.S. Wrighton, R. Spreiter, Ch. Bosshard and P. Günter
"Effect of the Solid State Structure on the Third-Order Nonlinear Optical Response of New Poly(2,5-dialkoxy-p-phenyleneethynylene)s"
J. Phys. Chem. **100**, 18931 (1996)
- M.S. Wong, U. Meier, F. Pan, V. Gramlich, Ch. Bosshard and P. Günter
"Five-Membered Heteroaromatic Hydrazone Derivatives for Second-Order Nonlinear Optics"
Advanced Materials **8** (5), 416-420 (1996)
- M.S. Wong, J.-F. Nicoud, C. Runser, A. Fort, M. Barzoukas and E. Marchal
"Intramolecular Dipolar Coupling Enhancement of the First-Order Molecular Hyperpolarizability in a Polar Solvent"
Chemical Physics Letters **253**, 141-144 (1996)
- M.S. Wong, Ch. Bosshard, F. Pan and P. Günter
"Non-Classical Donor—Acceptor Chromophores for Second Order Nonlinear Optics"
Advanced Materials **8** (8), 677-680 (1996)
- M. Zgonik and P. Günter
"Cascading Nonlinearities in Optical Four-Wave Mixing"
J. Opt. Soc. Am. B **13** (3), 570-576 (1996)

Conference Publications

- Ph. Delaye, A. Blouin, L.-A. de Montmorillon, I. Biaggio, D. Drolet, J.-P. Monchalain and G. Roosen
"Detection of Ultrasonic Vibrations on Rough Surfaces Through the Photorefractive Effect"
Proc. Int. Soc. Opt. Eng. (SPIE), **2782** 464-475 (1996)
- T. Dietrich, R. Schlessler, Z. Sitar and P. Günter
"Growth of Organic Periodic Structures by Molecular Layer Deposition"
Mat. Res. Soc. Symp. Proc. Vol. **413**, 389-394 (1996)
- L. Eng, Ch. Seuret, M. Küpfer, H. Looser and P. Günter
"Optical and Structural Properties of Langmuir-Blodgett Films at the Air/Water and the Air/Solid Interface"
Proceedings of ECASIA '95, Montreux, H.J. Mathieu, B. Reihl and D. Briggs (eds.), John Wiley & Sons, New York, 475-478 (1996)
- D. Fluck, T. Pliska and P. Günter
"Compact Frequency Doubled Diode Laser at 491 nm"
OSA TOPS on Advanced Solid-State Lasers Vol. 1, S.A. Payne and C. Pollock (eds.), *Optical Society of America*, 365-368 (1996)

- D. Fluck, L. Beckers, P. Günter and Ch. Buchal
"Ion Implantation of Optical Electroceramics"
Proceedings of the 5th International Conference on Electronic Ceramics and Applications (European Ceramic Society) 5, 109-117 (1996)
- D. Fluck, P. Günter, St. Bauer and Ch. Buchal
"Phase-Matched Second-Harmonic Generation in Ion-Implanted KNbO_3 Channel Waveguides"
Advanced Solid-State Lasers, Technical Digest (Optical Society of America, Washington DC), 117-119 (1996)
- D. Fluck, T. Pliska, P. Günter, L. Beckers and Ch. Buchal
"Phase-Matched Second-Harmonic Generation in KNbO_3 Channel Waveguides"
Nonlinear Guides Waves and Their Applications, OSA Technical Digest Series (Optical Society of America, Washington DC) 15, 103-105 (1996)
- D. Fluck, T. Pliska and P. Günter
"A 10 mW Frequency Doubled Diode Laser at 491 nm"
Advanced Solid State-Lasers, Technical Digest (Optical Society of America, Washington DC), 135-137 (1996)
- D. Fluck, S. Brülisauer, P. Günter, L. Beckers and Ch. Buchal
"Ion-Implanted Photorefractive Waveguides"
Nonlinear Guides Waves and Their Applications, OSA Technical Digest Series (Optical Society of America, Washington DC) 15, 222-223 (1996)
- R. Kind
"Basic Electronic Concepts in Pulsed NMR Spectroscopy"
Lecture Notes of the AMPERE Summer Institute, Portoroz, SLO, 8.-14.9.96,
AMPERE Bulletin 45 (4), 185, 15-34 (1996)
- R.J. Knize, B. Ai, D.S. Glassner, T. Takekoshi and I. Biaggio
"Optical Information Processing Utilizing Alkali-Metal Vapors"
Proceedings of 12th International Conference on Laser Spectroscopy, Capri, I, World Scientific, Singapore, 168-172 (1996)
- Th. König, R. Kind and J. Dolinsek
" ^{87}Rb 2D-Exchange NMR Investigation of the Cluster Dynamics in the Deuteron Glass D-RADP-50"
Proceedings of the 28th Congress AMPERE on Magnetic Resonance and Related Phenomena, University of Kent at Canterbury, UK, 43-44 (1996)
- Th. König, R. Kind and Dolinsek
"Spin Diffusion at Room Temperature in the Deuteron Glass D-RADP-50 Observed by Exchange Difference NMR"
Proceedings of the 28th Congress AMPERE on Magnetic Resonance and Related Phenomena, University of Kent at Canterbury, UK, 236-237 (1996)
- T. Marty
"Magnetic Field Dependence of the Vapor-Cell Zeeman Optical Trap"
Helv. Phys. Acta 69, Separanda 2, 39-40 (1996)
- Z. Sitar, F. Gitmans, W. Liu and P. Günter
"Homo and Heteroepitaxial Growth of LiTaO_3 and LiNbO_3 by MBE"
Mat. Res. Soc. Symp. Proc. Vol. 401, 255-260 (1996)

ORAL PRESENTATIONS 1996

* = invited talk

L. Beckers, P. Leinenbach, S. Mesters, J. Schubert, W. Zander, J. Ziesmann, Ch. Buchal, D. Fluck and P. Günter
"Epitaxial BaTiO₃ and KNbO₃ Thin Films on Various Substrates for Optical Waveguide Applications"
Materials Research Society (MRS) 1996 Fall Meeting, Boston, Mass., USA, 2.-6.12.96

P. Bernasconi, I. Biaggio, M. Zgonik and P. Günter
"Anisotropy of Hole Drift Mobility in KNbO₃ and BaTiO₃"
3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled, SLO 26.-29.8.96

P. Bernasconi
"Ultraviolet Induced Photochromic and Photorefractive Effects in BaTiO₃"
CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

I. Biaggio, R.W. Hellwarth and J.P. Partanen
"Mobility of Large Polarons in Bi₂SiO₂₀"
3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled, SLO, 26.-29.8.96

* **I. Biaggio**, M. Ewart, H. Wüest, R. Ryf, S. Brülisaeur, D. Fluck, M. Zgonik and P. Günter
"Photorefractive Effect in KNbO₃ and KNbO₃ Waveguides in the Near-Infrared Spectral Range"
Workshop of the Oxide Crystals Network, Balatonfüred, H, 25.-28.9.96

Ch. Bosshard
"Structure-Property Relationship in Nonlinear Optical Tetraethynylethenes"
Materials for Nonlinear Optics, Val Thorens, F, 14.-18.1.96

* **Ch. Bosshard**
" $\chi^{(2)}$ - und $\chi^{(2)}$: $\chi^{(2)}$ - Effekte in Kristallen"
Universität Aachen, D, 24.1.96

Ch. Bosshard
"Structure-Property Relationships in Nonlinear Optical Tetraethynylethenes"
Frühjahrstagung der DPG, Fachbereich Chemische Physik, Regensburg, D 25.-29.3.96

* **Ch. Bosshard**
"Nonlinear Optical and Electro-Optic Effects of Crystals and Polymers"
ERPOS-7, Polanica Zdrój, PL, 18.-22.6.96

Ch. Bosshard
"One- and Two-Dimensional Charge-Transfer Molecules"
CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

Ch. Bosshard
"The Potential of Organic Crystals Based on Donor-Acceptor π -Conjugated Molecules for a Large Third-Order Nonlinear Optical Response"
Third International Conference on Organic Nonlinear Optics (ICONO '3), Marco Island, Florida, USA, 16.-20.12.96

Ch. Bosshard

"Nichtlinear optische Molekularkristalle: Neueste Entwicklungen"
Photonik Symposium, Stuttgart, D, 7.-9.10.96

Ch. Bosshard

"Nonlinear Optical Molecular Crystals: Newest Developments"
Symposium on Photonics and Organic Materials, CREOL, University of Central Florida, Orlando, FL, USA, 13.12.96

R. Spreiter, **Ch. Bosshard**, F. Pan and P. Günter

"Fast Linear Electro-Optic Response in the Organic Salt DAST"
Third International Conference on Organic Nonlinear Optics (ICONO '3), Marco Island, Florida, USA, 16.-20.12.96

Ch. Bosshard

"Crystal Engineering for Nonlinear Optics: Self-Assembling of Merocyanine Dyes with Highly Optimized Chromophoric Alignments in Crystalline Solids"
Third International Conference on Organic Nonlinear Optics (ICONO '3), Marco Island, Florida, USA, 16.-20.12.96

S. Brülisauer

"Two-Beam Coupling in Proton-Implanted Fe-Doped KNbO_3 Waveguides at Telecommunication Wavelengths"
CLEO '96, Anaheim, California, USA, 2.-7.6.96

S. Brülisauer

"Proton-Implanted KNbO_3 Exhibits Net Photorefractive Gain at Telecommunication Wavelengths up to 1550 nm"
CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

Ch. Buchal, L. Beckers, St. Bauer, D. Fluck, T. Pliska and P. Günter

"He Implanted Channel Waveguides of New Design for Efficient Blue Laser Light Generation"
Materials Research Society (MRS) 1996 Fall Meeting, Boston, Mass., USA
2.-6.12.96

J. Castillo, J. Hernandez, E. Camarillo, J. Hernandez and C. Medrano

"Cacterización Espectroscopica de Monocristales de $\text{KNbO}_3:\text{Cr}$ "
Mexican Physical Society Meeting, Oaxaca, Mexico, 16.-20.9.96

* **L. Eng**

"Optical and Structural Properties of Langmuir-Blodgett Films at the Air/Water and the Solid/Air Interface Investigated by Linear Optical, Nonlinear Optical and Scanning Force Microscopy"
University of Bern, Department of Chemical Physics, Bern, 16.1.96

* **L. Eng**

"Investigation of Ferroelectric Domain Walls by Scanning Force Microscopy"
University of Stuttgart, Stuttgart, D, 23.1.96

* **L. Eng**

"Ferroelectric Domains and Domain Boundaries Observed by Scanning Force Microscopy"
Symposium ISFD-4, Vienna, A, 25.-29.3.96

- * **L. Eng**
"Addressing Scanning Force Microscopy to Ferroelectric Surfaces and Liquid/Air Interfaces: Novel SFM Applications"
European Topometrix Workshop, Lyon, F, 14.5.96
- * **L. Eng**
""Optische und strukturelle Eigenschaften von Langmuir-Blodgett Filmen an der Luft/Wasser Grenzfläche: linear optische, nicht-linear optische und Rasterkraft-Mikroskopie"
University of Basel, Basel
- * **L. Eng**
"Optical and Structural Properties of Langmuir-Blodgett Films at the Air/Water and the Solid/Air Interface Investigated by Linear Optical, Nonlinear Optical and Scanning Force Microscopy"
American Chemical Society National Meeting, Orlando, FL, USA, 25.-30.8.96
- L. Eng**
"Voltage Modulated Scanning Force Microscopy of Ferroelectric Domains"
Herbsttagung der SPG, Zürich, 10.10.96
- L. Eng**
"Ferroelectric Domains and Domain Boundaries Observed by Scanning Force Microscopy"
Herbsttagung der SPG, Zürich, 11.10.96
- * **L. Eng**
"Tapping Mode Scanning Electrochemical Microscopy for Local Electrochemistry and Lithography"
ESM Project Meeting, Zürich, 9.12.96
- M. Ewart, M. Zgonik and P. Günter**
"Reduction - Oxydation Treatment of Photorefractive KNbO_3 "
3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled, SLO, 26.-29.8.96
- M. Ewart**
"Nanosecond Optical Response to Pulsed Ultraviolet Excitation in KNbO_3 "
CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96
- D. Fluck**
"A 10 mW Frequency-Doubled Diode Laser at 491 nm"
Advanced Solid State Lasers, San Francisco, California, USA, 31.1.-3.2.96
- D. Fluck**
"Phase-Matched Second-Harmonic Generation in Ion-Implanted KNbO_3 Channel Waveguides"
Advanced Solid State Lasers, San Francisco, California, USA, 31.1.-3.2.96
- D. Fluck**
"Cascaded Lens Waveguiding for Efficient Second-Harmonic Generation in KNbO_3 "
CLEO '96, Anaheim, California, USA, 2.-7.6.96
- * **D. Fluck**
"Ion-Implanted Photorefractive Waveguides"
Nonlinear Guided Waves and Their Applications Topical Meeting, Cambridge, UK 30.8.-1.9.96

D. Fluck

"Phase-Matched Second-Harmonic Generation in KNbO₃ Channel Waveguides"
 Nonlinear Guided Waves and Their Applications Topical Meeting, Cambridge, UK
 30.8.-1.9.96

* **D. Fluck**

"Photorefractive KNbO₃ Waveguides at 1.3 μm and 1.5 μm"
 Workshop on Ferroelectric Integrated Optics, St. Martin Vésuble, F, 3.-6.9.96

* **D. Fluck**

"Efficient Blue Light Generation by Frequency Doubling and Sum-Frequency Mixing
 of Laser Diodes in KNbO₃"
 CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

S. Follonier

"A New Nonlinear Optical Organic Crystal: 4-Dimethyl-aminobenzaldehyde-4-nitro-
 phenyl-hydrazone (DANPH)"
 Materials for Nonlinear Optics, Val Thorens, F, 14.-18.1.96

S. Follonier

"Photorefractive Properties of an Organic Salt"
 CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

* **P. Günter**

"The Photorefractive Effect"
 (Distinguished Lecture Series on "Photorefractive Effects, Materials and Applica-
 tions")
 CREOL, University of Central Florida, Orlando, FL, USA, 17.1.96

* **P. Günter**

"Applications in Dynamic Holography and Optical Storage"
 (Distinguished Lecture Series on "Photorefractive Effects, Materials and Applica-
 tions")
 CREOL, University of Central Florida, Orlando, FL, USA, 22.1.96

* **P. Günter**

"Photorefractive Effects in Waveguides"
 (Distinguished Lecture Series on "Photorefractive Effects, Materials and Applica-
 tions")
 CREOL, University of Central Florida, Orlando, FL, USA, 29.1.96

* **P. Günter**

"Organic Crystals and Langmuir-Blodgett Films for Nonlinear Optics"
 (Distinguished Lecture Series on "Photorefractive Effects, Materials and Applica-
 tions")
 CREOL, University of Central Florida, Orlando, FL, USA, 5.2.96

* **P. Günter**

"Study and Development of Wave Front Reversing Mirrors"
 European Space Agency (ESA), Noordwijk, NL, 26.2.96

* **P. Günter**

"The Photorefractive Effect in Inorganic and Organic Materials"
 Workshop on "Photorefractive Materials and Applications", Tokyo University, Tokyo,
 Japan, 11.3.96

- * **P. Günter**
"Novel Nonlinear Optical Organic Crystals"
Lecture Series on "Organic Nonlinear Optical and Photorefractive Materials and Applications" at RIKEN Institute, Wako, Saitama, Japan, 12.3.96
- * **P. Günter**
"Novel Nonlinear Optical Organic Molecules"
Lecture Series on "Organic Nonlinear Optical and Photorefractive Materials and Applications" at RIKEN Institute, Wako, Saitama, Japan, 13.3.96
- * **P. Günter**
"Guided-Wave Nonlinear Optics in Langmuir-Blodgett Films and Electro-Optics in Poled Polymers"
Lecture Series on "Organic Nonlinear Optical and Photorefractive Materials and Applications" at RIKEN Institute, Wako, Saitama, Japan, 18.3.96
- * **P. Günter**
"Introduction to Photorefractive Effects and Materials"
Lecture Series on "Organic Nonlinear Optical and Photorefractive Materials and Applications" at RIKEN Institute, Wako, Saitama, Japan, 19.3.96
- * **P. Günter**
"Optical Parallel Processing and Dynamic Holography"
Lecture Series on "Organic Nonlinear Optical and Photorefractive Materials and Applications" at RIKEN Institute, Wako, Saitama, Japan, 21.3.96
- * **P. Günter**
"Guided-Wave Photorefractive Effects and Associative Optical Memories"
Lecture Series on "Organic Nonlinear Optical and Photorefractive Materials and Applications" at RIKEN Institute, Wako, Saitama, Japan, 22.3.96
- * **P. Günter**
"KNbO₃ Crystals, Waveguides and Thin Films for Optical Frequency Doubling"
University of Osaka, Osaka, Japan, 1.4.96
- * **P. Günter**
"Blue-Green Solid State Lasers Using KNbO₃ Waveguides"
Shimadzu Corp., Kyoto, Japan, 3.4.96
- * **P. Günter, G. Montemezzani**
"Hologram Recording in KNbO₃ at Wavelengths Between 350 and 1550 nm"
International Symposium on Holographic Memories '96, Vouliagmeni, Athens, GR, 12.5.96
- * **P. Günter**
"Organic and Inorganic Photoreactive Materials"
Seminar, Centre d'Etudes Nucléaires de Saclay, F, 3.6.96
- * **P. Günter**
"The Photorefractive Effect: Physics, Materials and Potential Applications"
Seminar, Institut d'Optique, Université Paris-Sud, Orsay, F, 4.6.96
- * **P. Günter**
"Photorefractive Effects and Materials"
Seminar, Ecole Polytechnique, Palaiseau, F, 12.6.96
- * **P. Günter**
"Research on Nonlinear Optical Crystals and Polymers"
Centre National d'Etude en Télécommunication (CNET), Bagneux, F, 14.6.96

- * **P. Günter**
"Photorefractive Effects in KNbO₃ from 350 nm to 1550 nm"
Thomson-CSF, Central Research Laboratory, Orsay, F, 17.6.96
- * **P. Günter**
"Optical Frequency Conversion in KNbO₃ Crystals and Waveguides"
Thomson-CSF, Central Research Laboratory, Orsay, F, 17.6.96
- * **P. Günter**
"Novel High Nonlinearity Molecular Crystals"
OSA Topical Meeting on Nonlinear Optics: Materials, Fundamentals and Applications, Maui, USA, 10.7.96
- * **P. Günter**
"Novel Organic Molecular Crystals for Nonlinear Optics"
European Conference on Polar Dielectrics (ECAPD-3), Bled, SLO, 29.8.96
- * **P. Günter**
"Organic and Inorganic Photorefractive Materials"
CLEO '96 Conference on Lasers and Electro-optics, Hamburg, D, 12.9.96
- * **P. Günter**
"Nonlinear Optical and Electro-Optical Polymers"
Materialwissenschaftliches Kolloquium, Technische Universität Braunschweig, D, 7.11.96
- * **P. Günter**
"Blaue und abstimmbare Laser mit KNbO₃ Kristallen und Wellenleitern"
Optique II, Neuchâtel, 21.11.96
- R. Kind**
"Cluster Dynamics in the Deuteron Glass D-RADP-50: A 2D-NMR-Study"
Symposium ISFD-4, Wien, A, 25.-30.3.96
- R. Kind**
"⁸⁷Rb 2D-Exchange NMR Investigation of the Cluster Dynamics in the Deuteron Glass D-RADP-50"
28th AMPERE Congress, Canterbury, Kent, UK, 1.-6.9.96
- * **R. Kind**
"Basic Electronic Concepts in Pulsed NMR Spectroscopy I-III"
AMPERE Summer Institute, Portoroz, SLO, 8.-14.9.96
- * **R. Kind**
"2D-Exchange Spectroscopy in the Proton Glass D-RADP-50 Compared with 2D-Exchange Model Calculations"
J. Stefan Institute, Ljubljana, SLO, 12.12.96
- Th. König**
"Spin Diffusion at Room Temperature in the Deuteron Glass D-RADP-50 Observed by ⁸⁷Rb 2D-Exchange Spectroscopy"
28th AMPERE Congress, Canterbury, Kent, UK, 1.-6.9.96
- Th. König**
"Spin Diffusion at Room Temperature in the Deuteron Glass D-RADP-50 Observed by ⁸⁷Rb 2D Exchange Difference NMR"
AMPERE Summer Institute, Portoroz, SLO, 8.-14.9.96

Th. Marty

"Magnetic Field Dependence of the Vapor-Cell Zeeman Optical Trap"
Herbsttagung der SPG, Zürich, 10.10.96

* **C. Medrano, M. Zgonik and P. Günter**

"Photorefractive Effect in Doped KNbO₃ Crystals"
"Workshop on Nonlinear Materials", Tokyo University, Tokyo, Japan, 11.3.96

C. Medrano, M. Zgonik, K. Kitamura and P. Günter

"Photorefractive Effect in KNbO₃ Crystals in the Near Infrared Spectral Range"
3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled, SLO,
26.-29.8.96

U. Meier

"Five-Membered Heteroaromatic Hydrazone Derivatives for Second-Order Nonlinear Optics"
CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

G. Montemezzani, M. Zgonik and P. Günter

"Photorefractive Effects in Inorganic and Organic Materials"
3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled, SLO,
26.-29.8.96

G. Montemezzani

"Ultraviolet Induced Photochromic and Photorefractive Effects in BaTiO₃"
CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

F. Pan

"Electrooptical Properties of the Organic Salt 4-N,N-Dimethylamino-4'-N'-Methyl-Stilbazolium Tosilate (DAST)"
Materials for Nonlinear Optics, Val Thorens, F, 14.-18.1.96

F. Pan

"Strong Hydrogen Bonds as a Design Element for Crystal Engineering - CO-Crystallization of a Highly Nonlinear Optical Merocyanine Dye with Phenol Derivatives"
ERPOS-7, Polanica Zdrój, PL, 18.-22.6.96

H. Pierhöfer

"New Semiconducting Substrate for Heteroepitaxial Growth of K_{1-y}Na_yTa_{1-x}Nb_xO₃ (KNTN)"
3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled, SLO,
26.-29.8.96

T. Pliska

"Efficient Blue Light Second-Harmonic Generation Using Ion-Implanted KNbO₃ Channel Waveguides"
3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled, SLO,
26.-29.8.96

T. Pliska

"Ion-Implanted KNbO₃ Channel Waveguides for Efficient Blue Light Second-Harmonic Generation"
CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

I. Poberaj

"Study and Development of Wave Front Reversing Mirrors"
European Spacial Agency (ESA), Noordwijk, NL, 26.2.96

I. Poberaj

"Phase Conjugation"

Breadboarding of Critical Lidar Technologies CCN, Working Meeting 4, Cannes F, 29.2.96

I. Poberaj

"Study and Development of Wavefront Reversing Mirrors"

European Spacial Agency (ESA), Noordwijk, NL, 14.3.96

I. Poberaj, M. Zgonik

"Master Oscillator Power Amplifier with SBS Wavefront Correction"

CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

R. Ryf, G. Montmezzani, M. Zgonik and P. Günter

"Route to Spatial Solitons in Photorefractive KNbO₃ Crystals"

3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled,SLO, 26.-29.8.96

Ch. Seuret

"Optical and Scanning Force Microscopy of Langmuir Films"

SPG Tagung, Uni Irchel, Zürich, 10.10.96

R. Spreiter

"Fast Linear Electro-Optic Response in an Organic Salt"

CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

Y.Tao

"Structural and Electrical Properties of LiTaO₃ Thin Films Grown on Silicon by a Modified Molecular Beam Epitaxy"

3rd European Conference on Applications of Polar Dielectrics, ECAPD-3, Bled,SLO, 26.-29.8.96

M.-S. Wong

"Supramolecular Synthesis of Molecular Co-Crystals with Highly Optimized Chromophoric Orientation for Second-Order Nonlinear Optics"

American Chemical Society National Meeting, Symposium on Polymeric and Organic Materials for Optical Applications, Orlando, FL, USA, 25.-30.8.96

M.-S. Wong

"Furan and Thiophene Based Hydrazone Derivatives for Second-Order Nonlinear Optics"

American Chemical Society National Meeting, Symposium on Polymeric and Organic Materials for Optical Applications, Orlando, FL, USA, 25.-30.8.96

* **M. Zgonik**

"Perspective of the Photorefractive Effect in Optical Three Dimensional Storage"

Seminar at the NTT Interdisciplinary Research Laboratories, Tokai-mura, Naka-gun, Ibaraki, Japan, 7.3.96

M. Zgonik

"Nanosecond Optical Response to Pulsed Ultraviolet Excitation in KNbO₃"

CLEO/Europe-EQEC '96, Hamburg, D, 8.-13.9.96

PhD THESES IN PHYSICS 1996

Gitmans, Frank

"Growth of LiTaO₃ and LiNbO₃ Thin Films by Molecular Beam Epitaxy"

ETH Zürich, Nr. 11693 (Prof. Dr. P. Günter & Prof. Dr. M. Erbudak)

Marty, Thomas

"Laser Cooling of Cesium Atoms: An Experimental Study of the Magneto-Optical Trap"

ETH Zürich, Nr. 11771 (Prof. Dr. P. Günter & Dr. P. Thomann, Observatoire Cantonale de Neuchâtel)

Schlesser, Raoul

"Organic Electro-Optic Crystals and Thin Films: Optical Characterization and Molecular Beam Deposition"

ETH Zürich, Nr. 11456 (Prof. Dr. P. Günter & Prof. Dr. H. Melchior)

PhD THESIS IN CHEMISTRY 1996

Döbler, Claus Martin

"Herstellung und Charakterisierung von neuen photorefraktiven Polymeren"

ETH Zürich, Nr. 11960 (Prof. Dr. U.W. Suter, Prof. Dr. P. Günter &

Dr. P. Neuenschwander)

DIPLOMA THESES IN PHYSICS 1996

Cereghetti, Paola

"2D NMR Investigations on Partially Deuterated PMMA at Low Temperatures"
ETH Zürich, März 1996 (Prof. Dr. P. Günter)

Fierz, Martin

"Photorefractive Effect and Photoconductivity in 4-N,N-Dimethylamino-4'-N'-Methylstilbazolium Toluene-p-Sulfonate (DAST) Crystals"
ETH Zürich, Oktober 1996 (Prof. Dr. P. Günter)

Lardelli, Marco

"Zeitaufgelöste Untersuchung der Photorefraktion in eisen- und rhodiumdotiertem KNbO₃"
ETH Zürich, Juli 1996 (Prof. Dr. P. Günter)

Lötscher, Andreas

"Photorefraktive räumliche Solitonen in KNbO₃"
ETH Zürich, März 1996 (Prof. Dr. P. Günter)

Mazerant, Witold

"Bestimmung der nichtlinear optischen Eigenschaften 3. Ordnung von polaren Materialien"
ETH Zürich, Oktober 1996 (Prof. Dr. P. Günter)

Pouchon, Manuel

"Photorefraktiver Effekt in protonenimplantierten KNbO₃ Wellenleitern"
ETH Zürich, Juli 1996 (Prof. Dr. P. Günter)

Wiki, Max

"Photorefraktive räumliche Solitonen in KNbO₃"
ETH Zürich, September 1996 (Prof. Dr. P. Günter)