

# Heinrich Schwoerer

## Publications

### Diploma thesis

„Dynamik von Tunnelsystemen in KBr:KCN-Mischkristallen, Dielektrische Dispersion und Rotations-echos (dynamics of tunneling systems in KBr:KCN-mixed crystals, dielectric dispersion and rotational echoes)“, Ruprecht-Karls-Universität Heidelberg, 1991.

### Phd thesis

„Spektrale Lochbrennmaterialien als hochauflösende lineare Amplituden- und Phasenfilter für ultrakurze Laserpulse (spectral hole burning media as high resolution amplitude and phase filters for ultrashort laser pulses)“, Dissertation ETH Nr. 10933, Eidgenössische Technische Hochschule Zürich, 1994.

### Habilitation

„Physik in ultrakurzen und ultraintensiven Feldern (physics in ultrashort and ultraintense fields)“, Friedrich-Schiller-Universität Jena, 2002.

### book

H. Schwoerer, J. Magill, B. Beileites (eds.); „Lasers and Nuclei - Application of Ultrahigh Intensity Lasers in Nuclear Science“, Lecture Notes in Physics **694**, Springer, Heidelberg 2006.

### journal publications

A. Lübcke, F. Zamponi, R. Loetzsch, T.Kämpfer, I. Uschmann, V. Große, F. Schmidl, T.Köttig, M. Thürk, H. Schwoerer, E. Förster, P. Seidel, R. Sauerbrey,  
„Ultrafast structural changes in  $SrTiO_3$  due to superconducting phase transition in an  $YBa_2Cu_3O_7$  top layer“,  
accepted for publication in New Journal of Physics (July 2010).

M. Kaluza, H.-P. Schlenvoigt, S. Mangles, A. Thomas, A. Dangor, H. Schwoerer, W. Mori, Z. Najmudin, and K. M. Krushelnick,  
„Measurement of Magnetic-Field Structures in a Laser-Wakefield Accelerator“,  
accepted for publication in Physical Review Letters (July 2010).

G. Kassier, K. Haupt, N. Erasmus, E. Rohwer, H. Schwoerer,  
„Achromatic Reflectron Compressor Design for Bright Pulses in Femtosecond Electron Diffraction“,  
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J. Gallacher, M. Anania, E. Brunetti, F. Budde, A. Debus, B. Ersfeld, K. Haupt, M. Islam, O. Jäckel, S. Pfoth, A. Reitsma, E. Rohwer, H.-P. Schlenvoigt, H. Schwoerer, R. Shanks, S. M. Wiggins, and D. A. Jaroszynski  
„A method of determining narrow energy spread electron beams from a laser plasma wakefield accelerator using undulator radiation“,  
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„Quasimonoeenergetic Electron Acceleration in the Self-Modulated Laser Wakefield Regime“,  
Physics of Plasmas **16**, 043105 (2009).

H. Schwoerer,  
„Particle Acceleration with Lasers“,  
South African Journal of Science **104**, 299-304 (2008).

- H. Schwoerer,  
 „*The Power of Light – Molecular Movies and Particle Accelerators*“, inaugural lecture, Stellenbosch University, ISBN: 978-0-7972-1224-4.
- H.P. Schlenvoigt, K. Haupt, A. Debus, F. Budde, O. Jäckel, S. Pfotenhauer, J. Gallacher, E. Brunetti, R. Shanks, S. Wiggins, D. Jaroszynski, E. Rohwer, H. Schwoerer,  
 „*Synchrotron Radiation From Laser-Accelerated Monoenergetic Electrons*“,  
 IEEE Transactions on Plasma Science **36**, 1773-1781 (2008).
- K. Spohr, M. Shaw, W. Galster, K. Ledingham, L. Robson, J. Yang, P. McKenna, T. McCanny, J. Melone, K.-U. Amthor, F. Ewald, B. Liesfeld, H. Schwoerer, R. Sauerbrey,  
 „*Study of photo-proton reactions driven by bremsstrahlung radiation of high-intensity laser generated electrons*“,  
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- S. Pfotenhauer, O. Jäckel, A. Sachtleben, J. Polz, W. Ziegler, H.-P. Schlenvoigt, K.-U. Amthor, M. Kaluza, K. Ledingham, R. Sauerbrey, P. Gibbon, A. Robinson and H. Schwoerer,  
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