

Tobias Rybka

Attosecond Electron Transport in Plasmonic Nanostructures

Berichte aus der Physik

Tobias Rybka

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in Plasmonic Nanostructures**

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Attosecond Electron Transport **in Plasmonic Nanostructures**

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academic degree Doctor of Natural Sciences
(Doctor rerum naturalium)**

submitted by

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at the

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OPA	optical parametric amplifier
BEM	boundary element method
ATP	above-threshold photoemission
ATI	above-threshold ionization
RSD	relative standard deviation
FN	Fowler-Nordheim
2DSI	two-dimensional spectral shearing interferometry
SMU	source meter unit
AFM	atomic force microscope
SEM	scanning electron microscope
EBL	electron-beam lithography
RMS	root-mean-square
BBO	beta barium borate
TBP	time-bandwidth product
CEP	carrier-envelope phase
CEO	carrier-envelope offset
SAM	semiconductor saturable absorber mirror
GDD	group delay dispersion
GVD	group velocity dispersion
SPM	self-phase modulation
XPM	cross-phase modulation
FWM	four-wave mixing
PPLN	periodically poled lithium niobate
SRS	stimulated raman scattering
DFG	difference frequency generation

NLSE	nonlinear Schroedinger equation
ZDW	zero-dispersion wavelength
WDM	wavelength-division multiplexing
EDF	erbium doped fiber
EDFA	erbium-doped fiber amplifier
MFA	mode field area
MFD	mode field diameter
HNF	highly nonlinear bulk silica fiber
PCF	photonic crystal fiber
PM	polarization-maintaining
NPE	nonlinear polarization evolution
NALM	nonlinear amplifying loop mirror
FWHM	full-width at half-maximum
FROG	frequency-resolved optical gating
IMFP	inelastic mean free path
EMFP	elastic mean free path
I-V	current-voltage