
PRESENTATIONS AND PUBLIC APPEARANCES

Conferences

Photonics West 2006, oral presentation, "Tailored excitation sequences for optimized laser induced modifications in bulk transparent materials exposed to sub-ps irradiation", San Jose, California, USA.

Laser Precision Microfabrication 2005, oral presentation, "Direct observation of femtosecond laser induced modifications in the bulk of fused silica by phase contrast microscopy" Williamsburgh, VA, USA.

Femto2004, poster, "Mise en forme temporelle adaptative d'impulsions ultrabrèves", Ile de Porquerolles, France.

Femtomat 2004, oral presentation, "Temporal beam shaping of femtosecond pulses: Importance in micro machining", Bad Kleinkirchheim, Austria.

Invited seminars

Princeton University, Princeton Institute for Science and Technology of Materials, Department of Mechanical and Aerospace Engineering, "Analysis and Optimization of Photoinduced Modifications in Dielectrics with Ultrafast Pulses" (October 2006).

University of Toronto, Department of Electrical and Computer Engineering, "Optimal control for optical structures written with ultrafast pulses".

Other

Results derived from my activity have been presented in invited and contributed talks by group colleagues at:

- The 4th International Congress on Laser Advanced Materials Processing 2006, Kyoto, Japan
- High-Power Laser Ablation Conference, HPLA 2006, Taos, USA
- 7^{eme} journées des phénomènes ultra-rapides, JPU 2005, Villeneuve d'Ascq, France
- SPIE European Symposium on Optics/Photonics in Security and Defence 2005, Bruges, Belgium
- Conference on Laser Ablation COLA 05, 11.09-16.09.2005 Banff, Canada
- SPIE Photonics West'05 International Symposium on "Ultrafast Phenomena in Semiconductors and Nanostructure Materials IX", San Diego, USA

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- Laser Precision Microfabrication LPM2004, Nara, Japan
 - High-Power Laser Ablation Conference, HPLA 2004, Taos, USA
 - Conference on Laser Ablation COLA 2003, Heraklion, Greece

PUBLICATIONS

Refereed articles

N. Huot, R. Stoian, A. Mermillod-Blondin, C. Mauclair and E. Audouard, "Analysis of the effects of spherical aberration on ultrafast laser-induced refractive index variation in glass", OPTICS EXPRESS, accepted.

A. Mermillod-Blondin, I.M. Burakov, R. Stoian, A. Rosenfeld, E. Audouard, N.M. Bulgakova and I.V. Hertel, "Direct observation of femtosecond laser induced modifications in the bulk of fused silica by phase contrast microscopy", JOURNAL OF LASER MICRO/NANOENGINEERING 1 (3), Art. No. 05-032, 2006.

S.W. Winkler, I.M. Burakov, R. Stoian, N.M. Bulgakova, A. Husakou, A. Mermillod-Blondin, A. Rosenfeld, D. Ashkenasi, I.V. Hertel, "Transient response of dielectric materials exposed to ultrafast laser radiation", APPLIED PHYSICS A 84, pp 413-422, 2006.

R. Stoian, A. Mermillod-Blondin, N.M. Bulgakova, A. Rosenfeld, I.V. Hertel, M. Spyridaki, E. Koudoumas, P. Tzanetakis and C. Fotakis, "Optimization of ultrafast laser generated low-energy ion beams from silicon targets", APPLIED PHYSICS LETTERS 87 (12) : Art. No. 124105 SEP 2005.

R. Stoian, A. Mermillod-Blondin, S.W. Winkler, A. Rosenfeld, I.V. Hertel, "Temporal manipulation and consequences for ultrafast laser processing of materials", M. Spyridaki, E. Koudoumas, P. Tzanetakis and C. Fotakis, OPTICAL ENGINEERING 44 (5) : Art. No. 051106 MAY 2005. Invited paper for the Topical Issue J. Opt. Eng. (modeling and applications of laser ablation and micromachining in optics).

I.M. Burakov, N.M. Bulgakova, R. Stoian, A. Mermillod-Blondin, E. Audouard, A. Rosenfeld, A. Husakou and I.V. Hertel, "Spatial distribution of refractive index variations induced in bulk fused silica by single ultrashort and short laser pulses", JOURNAL OF APPLIED PHYSICS 101 (4) : Art. No. 043506.

Conference proceedings

A. Mermillod-Blondin, R. Stoian, M.L. Boyle, A. Rosenfeld, I.M. Burakov, N.M. Bulgakova, E. Audouard, and I.V. Hertel, "Tailored excitation sequences for optimized laser-induced modifications in bulk transparent materials exposed to sub-ps irradiation", Proc. SPIE 6106, 159-167 (2006).

R. Stoian, N.M. Bulgakova, A. Mermillod-Blondin, A. Rosenfeld, I.V. Hertel, "Adaptive control of ion beams produced by ultrafast laser ablation of silicon", Proc. SPIE 5725, 329-343 (2005).

R. Stoian, A. Mermillod-Blondin, S. Winkler, A. Rosenfeld, I.V. Hertel, M. Spyridaki, E. Koudoumas, C. Fotakis, I.M. Burakov, N.M. Bulgakova, "Temporal pulse manipulation and adaptive optimization in ultrafast laser material processing", Proc. SPIE 5662, 593-602 (2004).

R. Stoian, A. Mermillod-Blondin, A. Rosenfeld, I.V. Hertel, M. Spyridaki, E. Koudoumas, C. Fotakis, I.M. Burakov, N.M. Bulgakova, "Adaptive optimization in ultrafast laser material processing", Proc. SPIE 5448, 73-83 (2004).

Articles in preparation

S.M. Eaton, M.L. Ng, J.O. Bonse, A. Mermillod-Blondin, H. Zhang, A. Rosenfeld, P.R. Herman "Optical waveguides fabricated in Bk7 glass by high repetition rate femtosecond fiber laser", APPLIED PHYSICS A, submitted.

A. Mermillod-Blondin, I.M. Burakov, Yu. P. Meshcheryakov, N.M. Bulgakova, E. Audouard, A. Rosenfeld, A. Husakou, I.V. Hertel, and R. Stoian, "Flipping refractive index changes in ultrafast laser-irradiated optical glasses", PHYSICAL REVIEW LETTERS, submitted.

C. Mauclair, A. Mermillod-Blondin, N. Huot, E. Audouard, and R. Stoian, "Dynamic correction of frontwave distortions during ultrafast laser photoinscription of longitudinal waveguides in optical glasses".

A. Mermillod-Blondin, J.O. Bonse, A. Rosenfeld et al, "Subpicosecond time resolved imaging of laser-irradiated glasses in phase contrast microscopy".

A. Mermillod-Blondin, I.M. Burakov, Y. P. Meshcheryakov, N. M. Bulgakova, A. Husakou, A. Rosenfeld, E. Audouard, I. V. Hertel, and R. Stoian, "Modifications induced by ultrafast laser irradiation in transparent glassy materials".

A. Mermillod-Blondin, I.M. Burakov, R. Stoian, A. Rosenfeld, E. Audouard, N.M. Bulgakova and I.V. Hertel "Chirp effects in laser-induced refractive index changes in bulk glassy materials".