

## LIST OF PUBLICATIONS (2021)

**Anne L'Huillier**

### **Publications in refereed journals:**

- 1- A. L'Huillier, L. A. Lompré, G. Mainfray and C. Manus, Phys. Rev. Lett. **48**, 1814 (1982) "*Multiply charged ions formed by multiphoton absorption processes in the continuum*"
- 2- A. L'Huillier, L. A. Lompré, G. Mainfray and C. Manus, J. Phys. B **16**, 1363 (1983) "*Multiply charged ions induced by multiphoton absorption processes in rare gas atoms at 1.064 μm*"
- 3- A. L'Huillier, L. A. Lompré, G. Mainfray and C. Manus, Phys. Rev. A **27**, 2503 (1983) "*Multiply charged ions induced by multiphoton absorption in rare gases at 0.53 μm*"
- 4- A. L'Huillier, L. A. Lompré, G. Mainfray and C. Manus, J. Physique **44**, 1247 (1983) "*Laser pulse duration effects in Xe<sup>2+</sup> ions induced by multiphoton absorption at 0.53 μm*"
- 5- A. L'Huillier, G. Mainfray and P. M. Johnson, Chem. Phys. Lett. **103**, 447 (1984) "*Multiphoton ionization versus dissociation of diatomic molecules irradiated by an intense 40 ps laser pulse*"
- 6- L. A. Lompré, A. L'Huillier, G. Mainfray and J. Y. Fan, J. Phys. B **17**, L817 (1984) "*Electron energy measurements in multiphoton ionization of xenon and neon*"
- 7- A. L'Huillier and M. Trahin, Phys. Lett. A **112**, 377 (1985) "*Perturbation order effect in multi-electron ionisation of He<sup>+</sup> ions*"
- 8- L. A. Lompré, A. L'Huillier, G. Mainfray and C. Manus, Phys. Lett. A **112**, 319 (1985) "*Multiphoton ionisation of He atoms at 532 nm*"
- 9- L. A. Lompré, A. L'Huillier, G. Mainfray and C. Manus, J. Opt. Soc. Am. B **2**, 1906 (1985) "*Laser intensity effects in the energy distributions of electrons produced in multiphoton ionization of rare gases*"
- 10- G. Wendin, L. Jönsson and A. L'Huillier, Phys. Rev. Lett. **56**, 1241 (1986) "*Screening effects in multi-electron ionization of heavy atoms in intense laser fields*"
- 11- A. L'Huillier, L. Jönsson and G. Wendin, Phys. Rev. A **33**, 3938 (1986) "*Many-electron effects in multiphoton ionization*"
- 12- A. L'Huillier, Com. At. Mol. Phys. **18**, 289 (1986) "*Multicharged ions in multiphoton ionization*"
- 13- A. L'Huillier and G. Wendin, J. Phys. B **20**, L37 (1987) "*Two-photon one-electron ionization of the 5p-shell of xenon including screening effects*"
- 14- A. L'Huillier and G. Wendin, Int. J. Quant. Chem. **31**, 833 (1987) "*Multiphoton ionization of many-electron atoms*"

- 15- G. Wendum, L. Jönsson and A. L'Huillier, J. Opt. Soc. Am. **4**, 833 (1987) "*Many-electron dynamics of heavy atoms in intense laser fields: effects of screening and correlation*"
- 16- A. L'Huillier and G. Wendum, Phys. Rev. A **36**, 4747 (1987) "*Linear and nonlinear screening effects in two-photon ionization of xenon*"
- 17- A. L'Huillier and G. Wendum, Phys. Rev. A **36**, 5632 (1987) "*Many-body approach to two or three-photon double ionization and excitation of xenon*"
- 18- A. L'Huillier and G. Wendum, J. Phys. B **21**, L247 (1988) "*Two-photon electron detachment of negative iodine*"
- 19- A. L'Huillier, L. A. Lompré, X. F. Li, M. Ferray, G. Mainfray and C. Manus, Europhys. Lett. **5**, 601 (1988) "*Third-harmonic generation in xenon in a pulsed jet and a gas cell*"
- 20- L. A. Lompré, M. Ferray, A. L'Huillier, X. F. Li and G. Mainfray, J. Appl. Phys. **63**, 1791 (1988) "*Optical determination of the characteristics of a pulsed-gas jet*"
- 21- M. Ferray, A. L'Huillier, X. F. Li, L. A. Lompré, G. Mainfray and C. Manus, J. Phys. B **21**, L31 (1988) "*Multiple harmonic conversion of 1064 nm radiation in rare gases*"
- 22- P. Lambropoulos, X. Tang, P. Agostini, G. Petite and A. L'Huillier, Phys. Rev. A **38**, 6165 (1988) "*Multiphoton spectroscopy of doubly excited bound and autoionizing states of strontium*"
- 23- X. Tang, A. L'Huillier and P. Lambropoulos, Phys. Rev. Lett. **62**, 111 (1989) "*Comment on laser induced continuum structure in xenon*"
- 24- A. L'Huillier, X. Tang and P. Lambropoulos, Phys. Rev. A. **39**, 1112 (1989) "*Multiphoton ionization of rare gases using multichannel quantum defect theory*"
- 25- A. L'Huillier, L. A. Lompré, D. Normand, X. Tang and P. Lambropoulos, J. Opt. Soc. Am. B **6**, 1790 (1989) "*Theoretical aspects of three-photon two-color ionization of xenon though ac-Stark-shifted resonant Rydberg states*"
- 26- D. Normand, L. A. Lompré, A. L'Huillier, J. Morellec, M. Ferray, J. Lavancier, G. Mainfray and C. Manus, J. Opt. Soc. Am. B **6**, 1513 (1989) "*AC Stark shifts induced by a YAG laser in the np and nf Rydberg series in Xe*"
- 27- A. L'Huillier, L. A. Lompré, D. Normand, J. Morellec, M. Ferray, J. Lavancier, G. Mainfray and C. Manus, J. Opt. Soc. Am. B **6**, 1644 (1989) "*Spectroscopy of the np and nf Rydberg series in Xe by two-photon excitation*"
- 28- X. Tang, P. Lambropoulos, A. L'Huillier and S. N. Dixit, Phys. Rev. A **40**, 7026 (1989) "*Theory of resonant multiphoton ionization of krypton by intense ultraviolet laser radiation*"
- 29- P. Agostini, P. Breger, A. L'Huillier, H. G. Muller, G. Petite, A. Antonetti, A. Migus, Phys. Rev. Lett. **63**, 2208 (1989) "*Giant Stark shifts in multiphoton ionization*"
- 30- X. F. Li, A. L'Huillier, M. Ferray, L. A. Lompré and G. Mainfray, Phys. Rev. A **39**, 5751 (1989) "*Multiple harmonic generation in rare gases at high laser intensity*"

- 31- L. A. Lompré, A. L'Huillier, M. Ferray, P. Monot, G. Mainfray and C. Manus, J. Opt. Soc. Am. B **7**, 754 (1990) "*High-order harmonic generation in xenon: intensity and propagation effects*"
- 32- A. L'Huillier, X. F. Li and L. A. Lompré, J. Opt. Soc. Am. B **7**, 529 (1990) "*Propagation effects in high-order harmonic generation in rare gases*"
- 33- M. Ferray, L. A. Lompré, O. Gobert, A. L'Huillier, G. Mainfray, C. Manus, A. Sanchez, A. Gomes, Opt. Comm. **75**, 278 (1990) "*Multi-terawatt picosecond Nd-Glass laser system at 1053 nm*"
- 34- D. Normand, M. Ferray, L. A. Lompré, O. Gobert, A. L'Huillier, G. Mainfray, Opt. Lett. **15**, 1400 (1990) "*Focused laser intensity measurement at  $10^{18} \text{ W/cm}^2$  and 1053 nm*"
- 35- A. L'Huillier, K. J. Schafer and K. C. Kulander, Phys. Rev. Lett. **66**, 2200 (1991) "*High order harmonic generation in xenon at 1064 nm: the role of phase matching*"
- 36- A. L'Huillier, K. J. Schafer and K. C. Kulander, J. Phys. B **24**, 3315 (1991) (topical review) "*Theoretical aspects of harmonic generation in strong laser fields*"
- 37- A. L'Huillier, P. Balcou, S. Candel, K. J. Schafer and K. C. Kulander, Phys. Rev. A **46**, 2778 (1992) "*Calculations of harmonic generation processes in xenon at 1064 nm*"
- 39- A. L'Huillier, Ph. Balcou and L. A. Lompré, Phys. Rev. Lett. **68**, 166 (1992) "*Coherence and resonance effects in high order harmonic generation*"
- 40- Ph. Balcou, A. S. L. Gomes, C. Cornaggia, L. A. Lompré, A. L'Huillier, J. Phys. B, **25**, 4467 (1992) "*Optimizing high order harmonic generation in strong fields*"
- 41- Ph. Balcou, L.A. Lompré and A. L'Huillier, Nonlinear Optics **5**, 45 (1993) "*Phase matching effects in high order harmonic generation*"
- 42- A. L'Huillier and Ph. Balcou, Phys. Rev. Lett. **70**, 774 (1993) "*High-order harmonic generation in rare gases with a 1-ps 1053 nm laser*"
- 43- Ph. Balcou and A. L'Huillier, Phys. Rev. A **47**, 1447 (1993) "*Phase matching effects in strong field harmonic generation*"
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- 48- K. S. Budil, P. Salières, A. L'Huillier, T. Ditmire and M. D. Perry, Phys. Rev. A **48**, R3437 (1993) "*The influence of ellipticity on high order harmonic generation*"

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- 51- J. Larsson, E. Mevel, R. Zerne, A. L'Huillier, C.-G. Wahlström and S. Svanberg, J. Phys. B. **28**, L53 (1995) "Two-colour time-resolved spectroscopy of helium using high-order harmonics"
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- 55- A. L'Huillier, T. Auguste, Ph. Balcou, B. Carré, P. Monot, P. Salières, C. Altucci, M. B. Gaarde, J. Larsson, E. Mevel, T. Starczewski, S. Svanberg, C.-G. Wahlström, R. Zerne, K. S. Budil, T. Ditmire, M. D. Perry, J. of Nonlinear Optical Physics and Materials **4**, 647 (1995) "High-order harmonics: a coherent source in the XUV range"
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- 58- M. B. Gaarde, P. Antoine, A. Persson, B. Carré, A. L'Huillier and C.-G. Wahlström, J. Phys. B **29**, L163 (1996) "High-order tunable sum- and difference frequency mixing in the XUV region"
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- 61- D. Joyeux, P. Jaeglé and A. L'Huillier in "Current trends in Optics" vol. 3, Anna Consortini ed., Academic Press, 1996, p 371 "Doing coherent optics with soft X-ray sources"
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- 67- P. Salières, T. Ditmire, M. D. Perry, A. L'Huillier and M. Lewenstein, J. Phys. B **29**, 4771 (1996) “*Angular distributions of high-order harmonics generated by a femtosecond laser*”
- 68- P. Antoine, B. Carré, A. L'Huillier and M. Lewenstein, Phys. Rev. A **55**, 1314 (1997) “*Polarization of high-order harmonics*”
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- 70- S. Svanberg, A. L'Huillier and C.-G. Wahlström, Nucl. Instr. and Methods in Physics A **398**, 55 (1997) “*Atomic Physics using short-wavelength coherent radiation*”
- 71- R. Zerne, C. Altucci, M. Bellini, M. B. Gaarde, T. W. Hänsch, A. L'Huillier, C. Lyngå and C.-G. Wahlström, Phys. Rev. Lett. **79**, 1006 (1997) “*Phase-locked high-order harmonic sources*”
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- 73- M. B. Gaarde, P. Antoine, A. L'Huillier, K. J. Schafer and K. C. Kulander, Phys. Rev. A **57**, 4553 (1998) “*Macroscopic studies of short-pulse high-order harmonic generation using the time-dependent Schrödinger equation*”.
- 74- P. Cacciani, W. Ubachs, P. C. Hinnen, C. Lyngå, A. L'Huillier and C.-G. Wahlström, The Astrophys. J. **499**, L223 (1998) “*Lifetime measurements of the E<sup>1</sup>P, v=0 and v=1 states of <sup>12</sup>C<sup>16</sup>O, <sup>13</sup>C<sup>16</sup>O and <sup>13</sup>C<sup>18</sup>O*”.
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- 85- D. Descamps, C. Lyngå, J. Norin, A. L'Huillier, C.-G. Wahlström, J.-F. Hergott, H. Merdji, P. Salières, M. Bellini and T. W. Hänsch, Opt. Lett. **25**, 135 (2000) "Extreme ultraviolet interferometry measurements with high-order harmonics"
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- 90- J.-F. Hergott, H. Merdji, P. Salières, L. Le Déroff, , B. Carré, D. Joyeux, D. Descamps, J. Norin, C. Lyngå, A. L'Huillier, C.-G. Wahlström, M. Bellini, S. Hüller, Laser and Particle Beams **19**, 35 (2001) "XUV interferometry using high-order harmonics: Application to plasma diagnostics"
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## Patent

An international patent application concerning the “d-scan” technology was filed on the 11th of October 2011 (PCT/IB2012/055522). The patent application was published on the 18th of April 2013 (WO2013/054292 A1).

Another one was submitted in August 2017 on “single shot d-scan”.

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