Abdallah Mohammed Ali Azzeer, PhD, CPhys

EDUCATION:

Ph.D. University of Wales, Swansea, Wales, United Kingdom.
Major: **Physics**
Minor: **Laser Spectroscopy, Nonlinear Optics**

M.Sc. Colorado State University, Fort Collins, Colorado, United State of America.
Major: **Physics**
Minor: **Material Science**

B.Sc. (Distinguish) King Saud University, College Science**,** Riyadh, Kingdom of Saudi Arabia.

Major: **Physics, General Math**

RESEARCH INTERESTS & SPECIALIZATION:

Since the beginning of my career;

- Nonlinear Optics Phenomena (SRS, SBS, LIG in Liquids, Crystals and Polymers).
- Design and construct different type of Lasers.
- Laser Induced Breakdown Spectroscopy (LIBS), Photoacoustic Spectroscopy (PAS) and Laser Induced Fluorescence (LIF).
- Applications of lasers in medicine, industry, holography and Ranging.

More recent;

- Ultrafast (femtosecond - attosecond) laser technology.
- Development of coherent short-wavelength sources.
- Attosecond metrology and spectroscopy.

EMPLOYMENT AND ADMINISTRATIVE:

- Associated Prof. of Physics, Physics Department, College of Science, KSU.
- On Secondment from KSU to Space Research Institute, KACST.
- Assistant Prof. of Physics, Physics Department, College of Science, KSU.
- Teaching Assistant of Physics (Scientific Demonstrator), Department of Physics, KSU.

ADMINISTRATIVE ASSIGNMENTS:

- Research group leader at the International Max Planck Research School on Advanced Photon Science (IMPRS-APS).
- Supervisor of the research collaboration between KSU & MPQ.
- Dean of college of Science & Arts at Shaqra - Shaqra University.
- Supervisor of Girls College for Applied Medical Sciences- Shaqra University.
- Chairman of the Kingdom of Saudi Arabia delegation in the Gulf States scientific visit to People's Republic of China.

- Chairman of the Kingdom of Saudi Arabia delegation to the first international science activities conference of Asia, which held in Qatar.
- Laser Application Center manager, Space Research Institute, KACST.
- Chairman of Physics Department, College of Science, KSU .
- Acting Chairman of Astronomy Department, College of Science, KSU .
- Supervision of Scientific Hobbies and Invention of the deanship student affairs at KSU .
- Head of Social Society, College of Science, KSU
- Coordinator of Laser Research Group, Physics Department, KSU.

ACADEMIC ACTIVITIES:

- Supervision of 10 M.Sc. students thesis's, 2 PHD students & Co-supervisor of several M.Sc. theses'.
- External and internal examiner for several M.Sc. & PhD theses.
- Design and construction of "white light He-Cd Laser" at King Saud University
- Reviewer of several research projects & papers.

RECENT PUBLISHED RESEARCH PAPERS:

[1]. S. Zherebtsov, F. Süßmann, P. Peltz, J. Plenge, K. Betsch, I. Znakovskaya, A. Alnaser, N. Johnson, M. Kübel, A. Horn, V. Mondes, G. Graf, S. A. Trushin, A. M. Azzeer, M. J. J. Vrakking, G. G. Paulus, F. Krausz, E. Rühl, Th. Fennel, and M. F. Kling "Carrier–envelope phase-tagged imaging of the controlled electron acceleration from SiO2 nanospheres in intense few-cycle laser fields," New Journal of Physics 14, 075010 (2012)

[2]. A. Wirth, M. Th. Hassan, I. Grguraš, J. Gagnon1, A. Moulet, T. T. Luu, S. Pabst, R. Santra, Z. A. Alahmed, A. M. Azzeer, V. S. Yakovlev, V. Pervak, F. Krausz, E. Goulielmakis, "Synthesized Light Transients," Science , Vol. 334 no. 6053 pp. 195-200 (2011)

[3]. Ioachim Pupeza, Tino Eidam, Jan Kaster, Birgitta Bernhardt, Jens Rauschenberger, Akira Ozawa, Ernst E. Fill, Thomas Udem, Matthias F. Kling, Jens Limpert, Zeyad A. Alahmed, Abdallah M. Azzeer, Andreas Tünnermann, Theodor W. Hänsch and Ferenc Krausz, "Power scaling of femtosecond enhancement cavities and high-power applications", Proc. SPIE 7914, 79141I (2011); doi:10.1117/12.877532

[4]. F. Reiter, U. Graf, E. E. Serebryannikov, W. Schweinberger, M. Fiess, M. Schultze, A. M. Azzeer, R. Kienberger, F. Krausz, A. M. Zheltikov, and E. Goulielmakis, "Route to attosecond nonlinear spectroscopy "Physical Review Letters, Vol. 105, No. 24, 243902 -4 (2010).

[5]. Eleftherios Goulielmakis, Zhi-Heng Loh, Adrian Wirth, Robin Santra, Nina Rohringer, Vladislav S. Yakovlev, Sergey Zherebtsov, Thomas Pfeifer, Abdallah M. Azzeer, Matthias F. Kling, Stephen R. Leone & Ferenc Krausz, "Real-time observation of valence electron motion", Nature, 466, 739-743 (2010).

[6]. Florentin Reiter, Ulrich Graf, Martin Schultze, Wolfgang Schweinberger, Hartmut Schröder, Nicholas Karpowicz, Abdallah Mohammed Azzeer, Reinhard Kienberger, Ferenc Krausz, and Eleftherios Goulielmakis, "Generation of 2.8 fs pulses in the deep ultraviolet", Opt. Lett. Vol. 35, No. 13, pp. 2248-2250 (2010).

[7]. M. Schultze, M. Fieß, N. Karpowicz, J. Gagnon, M. Korbman, M. Hofstetter, A. Cavalieri, Y. Komninos, Th. Mercouris, C. A. Nicolaides, R. Pazourek, S. Nagele, J. Feist, J. Burgdörfer, A. M. Azzeer, R. Ernstorfer, R. Kienberger, U. Kleineberg, E. Goulielmakis, F. Krausz and V. S. Yakovlev, " Delay in Photoemission" , Science , Vol. 328. no. 5986, pp. 1658 - 1662 (2010).

[8]. M. Abdel-Aty, Abdallah Azzeer and M. Sebawe Abdalla, "Anabiosis of phase distribution of a three-level atom." Physica A 389, 3375-3381 (2010).

[9]. Ioachim Pupeza, Tino Eidam, Jens Rauschenberger, Birgitta Bernhardt, Akira Ozawa, Ernst Fill, Alexander Apolonski, Thomas Udem, Jens Limpert, Zeyad A. Alahmed, Abdallah M. Azzeer, Andreas Tünnermann, Theodor W. Hänsch, and Ferenc Krausz, "Power scaling of a high-repetition-rate enhancement cavity", Opt. Lett. Vol. 35, No. 12 (2010).

[10]. E. M. Bothschafter, A. Schiffrin, V.S. Yakovlev, A.M. Azzeer, F. Krausz, R. Ernstorfer and R. Kienberger, "Collinear generation of ultrashort UV and XUV pulses", Optics Express 18, 9173-9180 (2010).

[11]. Hashem, A. M. Azzeer, and A. Ayoub, "The Removal of Hg (II) Ions from Laboratory Wastewater onto Phosphorylated Haloxylon ammodendron: Kinetic and Equilibrium Studies", Polymer-Plastics Technology and Engineering, 49, 1463–1472, (2010).

[12]. A.S. Al-Dwayyan, A.M. Al-Dukhayel, A.M. Azzeer and A.M. Kamal "Polarization Instability of Vertical Cavity Surface Emitting Lasers", J. King Saud Univ.,(2009/1430H) 21, Science (special issue), 93-101.

BOOKS;

[1]. Abdallah M. Azzeer & V. Masilamani "Laser the light extraordinary", Anuradha Agencies, Educational Publishers, Vidaylkaruppur, Kumbakonam R.M.S., India (1999).

[2]. Abdallah M. Azzeer & V. Masilamani "ABC of Laser", Anuradha Agencies, Educational Publishers, Vidaylkaruppur, Kumbakonam R.M.S., India (1999).

RECENT CONFERENCE, SYMPOSIA AND OTHER ACTIVITIES:

(I) *Conferences:*

- V.S. Yakovlev, M. Schultze, M. Fieß, N. Karpowicz, J. Gagnon, M. Korbman, M. Hofstetter, S. Neppl, A.L. Cavalieri, Y. Komninos, Th. Mercouris, C.A. Nicolaides, R. Pazourek, S. Nagele, J. Feist, J. Burgdörfer, A. M. Azzeer, R. Ernstorfer, R. Kienberger, U. Kleineberg, E. Goulielmakis, and F. Krausz, "Time-resolving photoionization with attosecond streaking spectroscopy" 20th International Laser Physics Workshop (LPHYS'11) July 11–15, 2011, Sarajevo, Bosnia and Herzegovina.

- A. Wirth, M.Th. Hassan, I. Grguras, J. Gagnon, A. Moulet, T.T. Luu, S. Pabst, R. Santra, Z. Alahmed, A.M. Azzeer, V.S. Yakovlev, V. Pervak, F. Krausz, and E. Goulielmakis, "Sub optical-cycle waveform light synthesis: steering and tracing ionization and electron dynamics in real-time" 20th International Laser Physics Workshop (LPHYS'11) July 11–15, 2011, Sarajevo, Bosnia and Herzegovina.

- Ioachim Pupeza, Tino Eidam, Jan Kaster, Birgitta Bernhardt, Jens Rauschenberger, Akira Ozawa, Ernst E. Fill, Thomas Udem, Matthias F. Kling, Jens Limpert, Zeyad A. Alahmed, Abdallah M. Azzeer, Andreas Tünnermann, Theodor W. Hänsch and Ferenc Krausz, "Power scaling of femtosecond enhancement cavities and high-power applications", Proc. SPIE 7914, 79141I (2011); doi:10.1117/12.877532

- Pupeza, T. Eidam, B. Bernhardt, A. Ozawa, J. Rauschenberger, E. Fill, A. Apolonski, Th. Udem, J. Limpert, Z. A. Alahmed, A. M. Azzeer, T. W. Hänsch, A. Tünnermann, F. Krausz, "Power Scaling of a 78 MHz-Repetition Rate Femtosecond Enhancement Cavity", The Conference on Lasers and Electro-Optics and The Quantum Electronics and Laser Science Conference (CLEO/QELS), May 16–21, 2010, San Jose, California

- Wolfgang Schweinberger, Reinhard Kienberger, Georg Korn, Aleksandr A. Voronin, Abdallah M. Azzeer, Aleksei M. Zheltikov and Ferenc Krausz, "Multigigawatt sub-cycle optical field waveforms from shock-wave-enhanced supercontinuum generation in a molecular gas", The Conference on Lasers and Electro-Optics and The Quantum Electronics and Laser Science Conference (CLEO/QELS), May 16–21, 2010, San Jose, California.

- Adrian Wirth, Eleftherios Goulielmakis, Zhi-Heng Loh, Robin Santra, Nina Rohringer, Vladislav S. Yakovlev, Sergey Zherebtsov, Thomas Pfeifer, Abdallah M. Azzeer, Matthias F. Kling, Stephen R. Leone, and Ferenc Krausz, "Attosecond Transient Absorption Spectroscopy", German Physical Society (DPG) Conference, 8 – 12 March 2010, Hannover, Germany.

- Adrian Wirth, Eleftherios Goulielmakis, Zhi-Heng Loh, Robin Santra, Nina Rohringer, Vladislav S. Yakovlev, Sergey Zherebtsov, Thomas Pfeifer, Abdallah M. Azzeer, Matthias F. Kling, Stephen R. Leone, Ferenc Krausz, "Attosecond Transient Absorption Spectroscopy for Real-Time Observation of Valence Electron Motion" 17th International Conference on Ultrafast Phenomena (UP), July 18–23, 2010, Snowmass Village, CO, USA. (Ranked the first paper among 388 submissions).

- The International conference for Nanotechnology, Riyadh, Saudi Arabia [5-7/4/2009].

- The European Conference on Lasers and Electro-Optics and the International Quantum Electronics Conference (CLEO®/Europe-IQEC), 17-22/6/2007, Munich, Germany.

- The 3rd Saudi conference for sciences, 10-13/3/2007, Riyadh, Saudi Arabia. Attend and present paper "Physical Properties of Laser Induced Gratings formed in Xanthene dye photopolymers", Abdallah M. Azzeer and Kawthar K. Alfares

Papers Prepared for publications;

- "Physical Properties of Laser Induced Gratings formed in Xanthene dye photopolymers",
- "Tunable Laser wavelength generation by SRS from H_2 Gas'
- "Quantitative Elemental Determination of Industrial Alloys by Laser Induced Breakdown Spectroscopy (LIBS)"
- "Coherent light generation by Stimulated Raman Scattering (SRS) from CO_2 gas"
- "Laser Generation from different Oils by Stimulated Scattering"

Membership of Scientific Associations:

- Institute of Physics (IOP). Elected as CHARTERED PHYSICISTS on 5/1994.
- Optical Society of America (OSA).
- The International Society of Optical Engineering (SPIE).
- Institute of Electrical and Electronic Engineering (IEEE).
- American Association of Physics Teachers (AAPT).

COMMITTEES:

- Member of several committees inside and outside the KSU.

COUNCILS:

- Member of Shaqra University Council, Shaqra University, Shaqra.
- Member and chair of College of Science and Arts Council, Shaqra, Shaqra University.
- Member of Qweayah Community College Council, Shaqra University.
- Member of King Saud University Council, KSU, Riyadh.
- Member of the Board Club Council of faculty members at KSU.
- Member of College of Science Council, KSU, Riyadh.
- Member and chair of physics department Council, KSU.
- Member and chair of Astronomy department Council, KSU.
- Member of research center administers council and representative of physics department, college of science, KSU.

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