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**Current Position:**

Division Director, Chemical Sciences Division

**Education:**

- 1975-79:** Maitrise de Physique (B. Sc.), *Major in theoretical Physics*, University of Algiers, Algeria
- 1981:** Diplome d'Etudes Approfondies (M. Sc.), "*Spectroscopy of Diatomic Molecules*", University Claude Bernard, Lyon I, France
- 1983:** Doctorat 3<sup>ieme</sup> Cycle, *Theoretical Spectroscopy of Diatomic molecules – Generalized ladder operator method*, University Claude Bernard, Lyon I, France. Thesis Adviser: Professor Georges Bessis.
- 1986:** Doctorat D'Etat es-Sciences de Physique, *Theoretical and Experimental Study of the Interaction of Ultrarelativistic Electrons, Positrons and Photons with Aligned Crystals*, University Claude Bernard, Lyon I, France. Thesis Adviser: Professor Joseph Remillieux.

**Professional Experience:**

- Director, Chemical Sciences Division since 04/2013
- Acting Director, Chemical Sciences Division (07/2010 – 11/2010 and 05/2012 – 04/2013)
- Senior Scientist and Principal Investigator in Chemical Sciences Division Since 1989.
- Chemical Sciences Division Deputy Director (2003-2011)
- Postdoctoral Fellow, Physics Division, Argonne National Laboratory (1987-89).
- Postdoctoral Fellow, Laboratoire d'Annecy-le-Vieux de la Physique des Particules, France (1986-1987).

**Recent Professional Services:**

- Member of the Committee on Atomic, Molecular and Optical Sciences (CAMOS) – 2011-2014. (Activity of the Board on Physics and Astronomy – National Academies)
- Fellow of the American Physical Society
- Member of the American Chemical Society
- Member of the Optical Society of America
- Member of the American Association for the Advancement of Science
- Chair (2011-2012) of the nominating committee of the Division of Chemical Physics – American Physical Society.
- Chair of the I.I. Rabi Prize Committee (2009-2011) – American Physical Society
- Chair, LBNL Computer and Communications Services Advisory Committee (CSAC), (from 1999 until June 2003). – Initiated mid-range computing and Scientific Cluster Support at LBNL. CSAC member since 1990.
- Chair of LBNL Cost Distribution Committee (2006-2007)

## ALI BELKACEM

### LIST OF PUBLICATIONS

1. D.S. Slaughter, Y. Kawarai, H. Adaniya, Th. Weber, Y. Azuma, C. Winstead, and V. McKoy, "Dynamics of the dissociating uracil anion following resonant electron attachment", *J. Phys. Chem. Lett.*, 5 (2014) 3854.
2. L. Gomez, K. Ferguson, J. Cryan, C. Bacellar, R. Tanyag, C. Jones, S. Schorb, D. Anielski, A. Belkacem, C. Bernando, R. Boll, J. Bozek, S. Carron, G. Chen, T. Delmas, L. Englert, S. Epp, B. Erk, L. Foucar, R. Hartmann, A. Hexemer, M. Huth, J. Kwok, S. Leone, J. Ma, F. Maia, E. Malmerberg, S. Marchesini, D. Neumark, B. Poon, J. Prell, D. Rolles, B. Rudek, A. Rudenko, M. Seifrid, K. Siefermann, F. Sturm, M. Swiggers, J. Ullrich, F. Weise, P. Zwart, C. Bostedt, O. Gessner, A. Vilesov, "Shapes and vorticities of superfluid helium nanodroplets", *SCIENCE*, 345 (2014) 906.
3. K. Siefermann, C. Pemmaraju, S. Neppel, A. Shavorsky, A. Cordones, J. Vura-Weis, D. Slaughter, F. Sturm, F. Weise, H. Bluhm, M. Strader, H. Cho, M-F. Lin, C. Bacellar, C. Khurmy, J. Guo, G. Coslovich, J. Robinson, R. Kaindl, R. Schoenlein, A. Belkacem, D. Neumark, S. Leone, D. Nordlund, H. Ogasawara, O. Krupin, J. Turner, W. Schlotter, M. Holmes, M. Messerschmidt, M. Minitti, S. Gul, J. Zhang, N. Huse, D. Prendergast, and O. Gessner, "atomic-scale perspective of ultrafast charge transfer at a dye-semiconductor interface", *J. Phys. Chem. Lett.*, 5 (2014) 2753.
4. B. Gaire, I. Bocharova, F.P. Sturm, N. Gehrken, J. Rist, H. Sann, M. Kunitski, J. Williams, M.S. Schoffler, T. Jahnke, B. Berry, M. Zohrabi, M. Keiling, A. Moradmand, A.L. Landers, A. Belkacem, R. Dorner, I. Ben-Itzhak, and Th. Weber., "Hydrogen and fluorine migration in photo-double-ionization of 1,1-difluoroethylene (1,1-C<sub>2</sub>H<sub>2</sub>F<sub>2</sub>) near and above threshold", *Phys. Rev. A* 89 (2014) 043423.
5. F. Trinter, M.S. Schoffler, H.K. Kim, F.P. Sturm, K. Cole, N. Neumann, A. Vredenburg, J. Williams, I. Bocharova, R. Guillemin, M. Simon, A. Belkacem, A.L. Landers, T. Weber, H. Schmidt-Bocking, R. Dorner, T. Jahnke, "Resonant Auger decay driving intermolecular Coulombic decay in molecular dimers", *NATURE* 505 (2014) 664
6. B. Gaire, S.Y. Lee, D.J. Haxton, P.M. Pelz, I. Bocharova, F.P. Sturm, N. Gehrken, M. Honog, M. Pitzer, D. Metz, H.K. Kim, M. Schoffler, R. Dorner, H. Gassert, S. Zeller, J. Voigtsberger, W. Cao, M. Zohrabi, J. Williams, A. Gatton, D. Reedy, C. Nook, T. Muller, A.L. Landers, C.L. Cocke, I. Ben-Itzhak, T. Jahnke, A. Belkacem, and T. Weber, "Photo-double-ionization of ethylene and acetylene near threshold", *Phys. Rev. A* 89 (2014) 013403
7. A. Moradmand, D.S. Slaughter, D.J. Haxton, T.N. Rescigno, C.W. McCurdy, T. Weber, S. Matsika, A.L. Landers, A. Belkacem, and M. Fogle, "Dissociative electron attachment to carbon dioxide via the 2P<sub>u</sub> shape resonance", *Phys. Rev. A* 88 (2013) 032703.
8. Y.H. Jiang, A. Senftleben, M. Kurka, A. Rudenko, L. Foucar, O. Herrwerth, M.F. Kling, M. Lezius, J.V. Tilborg, A. Belkacem, K. Ueda, D. Rolles, R. Trusch, Y.Z. Zhang, Y.F. Liu, C.D. Schroter, J. Ullrich, and R. Moshhammer, "Ultrafast dynamics in acetylene clocked in a femtosecond XUV stopwatch", *Journ. Phys. B-At. Mol. and Opt. Phys.*, 46 (2013) 164027.
9. M.S. Schoffler, C. Stuck, M. Waitz, F. Trinter, T. Jahnke, U. Lenz, M. Jones, A. Belkacem, A.L. Landers, M.S. Pindzola, C.L. Cocke, J. Colgan, A. Kheifets, I. Bray, H. Schmidt-Bocking, R. Dorner, and T. Weber, "Ejection of quasi-free-electron pairs from the helium-atom ground state by single photon absorption", *Phys. Rev. Lett.* 111 (2013) 013003.

10. D.S. Slaughter, D. Haxton, Y. Kawarai, H. Adaniya, Th. Weber, and A. Belkacem, "Ion Momentum imaging of resonant dissociative electron attachment dynamics in methanol", *Phys. Rev. A*, 87 (2013) 052711.
11. A. Shavorsky, A. Cordones, J. Vura-Weis, K. Siefertmann, D. Slaughter, F. Sturm, F. Weise, H. Bluhm, M. Strader, M-F. Lin, C. Bacellar, C. Khurmi, M. Hertlein, J. Guo, T. Tyliczszak, D. Prendergast, G. Coslovich, J. Robinson, R. Kaindl, R. Schoenlein, A. Belkacem, T. Weber, D. Neumark, S. Leone, D. Norlund, H. Ogasawara, A.R. Nilsson, O. Krupin, J. Turner, W. Schlotter, M. Holmes, P. Heimann, M. Messerschmidt, M. Minitti, M. Beye, S. Gul, J. Zhang, N. Huse, O. Gessner, "Time-resolved x-ray photoelectron spectroscopy techniques for real-time studies of interfacial charge transfer dynamics", AIP conference proceedings, Vol. 1525 (2013) 475.
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13. Adaniya H., Slaughter D.S., Osipov T. Weber T., Belkacem A., "A momentum imaging microscope for dissociative electron attachment", *Rev. Scient. Inst.* 83 (2012) 023106.
14. J.B. Williams, C.S. Trevisan, M.S. Schoffler, T. Jahnke, I. Bocharova, H. Kim, B. Ulrich, R. Wallauer, F. Sturm, T. N. Rescigno, A. Belkacem, R. Dorner, Th. Weber, C.W. McCurdy, A. L. Landers, "Probing the dynamics of dissociation of methane following core ionization using three-dimensional molecular frame photoelectron angular distributions", *J. Phys. B* 45 (2012) 194003.
15. F. Robicheaux, M.P. Jones, M. Schoeffler, T. Jahnke, K. Kreidi, J. Titze, C. Stuck, R. Doerner, A. Belkacem, T. Weber, and A. Landers, "Calculated and measured angular correlation between photoelectrons and Auger electrons from K-shell ionization", *J. Phys. B* 45 (2012) 175001.
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18. D. Slaughter, H. Adaniya, T. Rescigno, D. Haxton, C.W. McCurdy, A. Belkacem, A. Larson, A. Orel, "Resonant enhanced electron impact dissociation of molecules", *Journal of Physics, conference series*, volume 388 (2012) 032014
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20. D.J. Haxton, H. Adaniya, D.S. Slaughter, B. Rudek, T. Osipov, T. Weber, T.N. Rescigno, C.W. McCurdy, A. Belkacem, "Observation of the dynamics leading to a conical intersection in dissociative electron attachment to water", *Phys. Rev. A* 84 (2011) 030701.
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22. D.S. Slaughter, H. Adaniya, T.T. Rescigno, D.J. Haxton, A.E. Orel, C.W. McCurdy, A. Belkacem, "Dissociative electron attachment to carbon dioxide via 8.2 eV Feshbach resonance", *J. Phys. B: At. Mol. Opt. Phys.* 44 (2011) 205203.

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26. Y.H. Jiang, A. Rudenko, O. Herrwerth, L. Foucar, M. Kurka, K.U. Kuhnel, M. Lezius, M.F. Kling, J. van Tilborg, A. Belkacem, K. Ueda, S. Dusterer, R. Treusch, C.D. Schroter, R. Moshhammer and J. Ullrich, "Ultrafast extreme ultraviolet induced isomerization of acetylene cations", *Phys. Rev. Lett.* **105**, (2010) 263002.
27. T.K. Allison, T.W. Wright, A.M. Stooke, C. Khurmi, J. van Tilborg, Y. Liu, R.W. Falcone and A. Belkacem, "Femtosecond spectroscopy with vacuum ultraviolet pulse pairs", *Optics Lett.* **35**, (2010) 3664.
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31. N.A. Cherepkov, S.K. Semenov, M.S. Schoffler, J. Titze, N. Petridis, T. Jahnke, K. Cole, L. Ph. H. Schmidt, A. Czasch, D. Akoury, O. Jagutzki, J.B. Williams, T. Osipov, S. Lee, M.H. Prior, A. Belkacem, A.L. Landers, H. Schmidt-Bocking, R. Dorner and Th. Weber, "Auger decay of 1sg and 1su hole states of the N<sub>2</sub> molecule. II. Young type interference of Auger electrons and its dependence on internuclear distance", *Phys. Rev. A* **82**, (2010) 023420.
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