

BIBLIOGRAPHY

- [1] J. B. S. Haldane, *Possible worlds and other papers – On being the right size* (Harper & Brothers, New York, 1928). (document)
- [2] E. Schrödinger, *Ann. Phys.* **79-81** (1926). (document), 1, 4.1
- [3] A. H. Zewail, *Science* **23**, 1645 (1988). (document), 1
- [4] A. H. Zewail, *J. Phys. Chem. A* **104**, 5660–5694 (2000). (document), 1
- [5] P. H. Bucksbaum, *Science* **10**, 766 (2007). (document)
- [6] E. Rutherford, *Philos. Mag.* 6 **21**, 669 (1911). 1
- [7] N. Bohr, *Philos. Mag.* 6 **26**, 1 (1913). 1
- [8] M. Planck, *Verhandlungen der Deutschen Physikalischen Gesellschaft* **2**, 237 (1900). 1
- [9] M. Planck, *Ann. Phys.* **309**, 553–563 (1901). 1
- [10] A. Einstein, *Ann. Phys.* **322**, 132 (1905). 1
- [11] A. H. Compton, *Phys. Rev.* **21**, 483 (1923). 1
- [12] L. d. Broglie, *Philos. Mag.* 6 **47**, 446 (1924). 1
- [13] C. Davisson and L. H. Germer, *Phys. Rev.* **30**, 705 (1927). 1
- [14] M. Born, *Z. Phys.* **37**, 863 (1926). 1
- [15] E. Rutherford, *Philos. Mag.* 6 **37**, 581 (1919). 1
- [16] F. Aston, *Philos. Mag.* 6 **39**, 611 (1920). 1
- [17] A. S. Eddington, *The internal constitution of the stars* (Cambridge University Press, 1926). 1
- [18] J. Chadwick, *Nature* **129**, 312 (1932). 1
- [19] W. Pauli, Reprinted in Wolfgang Pauli, *Collected Scientific Papers*, ed. R. Kronig and V. Weisskopf **2**, 1313 (1930). 1
- [20] P. A. M. Dirac, *Proc. R. Soc. Lond. A* **133**, pp. 60 (1931). 1
- [21] C. D. Anderson and S. H. Neddermeyer, *Phys. Rev.* **50**, 263 (1936). 1

- [22] A. Einstein, Phys. Z **18**, 47 (1916). 1
- [23] T. H. Maiman (1960). 1
- [24] P. Agostini, F. Fabre, G. Mainfray, G. Petite, and N. K. Rahman, Phys. Rev. Lett. **42**, 1127 (1979). 1
- [25] A. McPherson, G. Gibson, H. Jara, U. Johann, T. S. Luk, I. McIntyre, K. Boyer, and C. K. Rhodes, JOSA B **4**, 595 (1987). 1
- [26] M. Ferray, A. l'Huillier, X. Li, L. Lompre, G. Mainfray, and C. Manus, J. Phys. B **21**, L31 (1988). 1
- [27] M. V. Fedorov and A. M. Movsesian, J. Phys. B **21**, L155 (1988). 1, 2.1
- [28] M. Dondera, H. G. Muller, and M. Gavrilu, Phys. Rev. A **65**, 031405 (2002). 1, 2.1
- [29] M. Boca, H. G. Muller, and M. Gavrilu, J. Phys. B **37**, 147 (2004). 1, 2.1
- [30] M. Pont and M. Gavrilu, Phys. Rev. Lett. **65**, 2362 (1990). 2.1
- [31] M. Gavrilu, J. Phys. B **35**, R147 (2002). 2.1, 2.2
- [32] A. M. Popov, O. V. Tikhonova, and E. A. Volkova, J. Phys. B **36**, R125 (2003). 2.1
- [33] R. Grobe and M. V. Fedorov, Phys. Rev. Lett. **68**, 2592 (1992). 2.1, 2.2
- [34] H. G. Müller, *Super-Intense Laser-Atom Physics IV* (Kluwer Academic Publishers, 1996). 2.1
- [35] S. Geltman, Chem. Phys. Lett. **237**, 286 (1995), ISSN 0009-2614. 2.1
- [36] X. Tang and S. Basile, Phys. Rev. A **44**, R1454 (1991). 2.1
- [37] M. P. de Boer, J. H. Hoogenraad, R. B. Vrijen, L. D. Noordam, and H. G. Muller, Phys. Rev. Lett. **71**, 3263 (1993). 2.1
- [38] N. J. van Druten, R. C. Constantinescu, J. M. Schins, H. Nieuwenhuize, and H. G. Muller, Phys. Rev. A **55**, 622 (1997). 2.1
- [39] M. Gajda, B. Piraux, and K. Rzażewski, Phys. Rev. A **50**, 2528 (1994). 2.2
- [40] T. Katsouleas and W. B. Mori, Phys. Rev. Lett. **70**, 1561 (1993). 2.2
- [41] C. H. Keitel and P. L. Knight, Phys. Rev. A **51**, 1420 (1995). 2.2
- [42] M. Førre, S. Selstø, J. P. Hansen, and L. B. Madsen, Phys. Rev. Lett. **95**, 043601 (2005). 2.2
- [43] F. W. Byron and C. J. Joachain, Phys. Rev. **164**, 1 (1967). 3
- [44] J. S. Briggs and V. Schmidt, J. Phys. B **33**, R1 (2000). 3, 3.2.4

- [45] L. Avaldi and A. Huetz, *J. Phys. B* **38**, S861 (2005). 3
- [46] J. A. R. Samson, W. C. Stolte, Z.-X. He, J. N. Cutler, Y. Lu, and R. J. Bartlett, *Phys. Rev. A* **57**, 1906 (1998). 3
- [47] T. Schneider, P. L. Chocian, and J.-M. Rost, *Phys. Rev. Lett.* **89**, 073002 (2002). 3, 3.2.3
- [48] M. A. M. Crance, *J. Phys. France* **46**, 1887 (1985). 3.1
- [49] A. L'Huillier and G. Wendin, *Phys. Rev. A* **36**, 5632 (1987). 3.1
- [50] M. A. Kornberg and P. Lambropoulos, *J. Phys. B* **32**, L603 (1999). 3.1
- [51] J. S. Parker, L. R. Moore, K. J. Meharg, D. Dundas, and K. T. Taylor, *J. Phys. B* **34**, L69 (2001). 3.1
- [52] L. A. A. Nikolopoulos and P. Lambropoulos, *J. Phys. B* **34**, 545 (2001). 3.1
- [53] T. Mercouris, C. Haritos, and C. A. Nicolaidis, *J. Phys. B* **34**, 3789 (2001). 3.1
- [54] J. Colgan and M. S. Pindzola, *Phys. Rev. Lett.* **88**, 173002 (2002). 3.1
- [55] B. Piraux, J. Bauer, S. Laulan, and H. Bachau, *Eur. Phys. J. D* **26**, 7 (2003). 3.1
- [56] L. Feng and H. W. van der Hart, *J. Phys. B* **36**, L1 (2003). 3.1, 3.1
- [57] S. Laulan and H. Bachau, *Phys. Rev. A* **68**, 013409 (2003). 3.1, 3.1
- [58] S. X. Hu, J. Colgan, and L. A. Collins, *J. Phys. B* **38**, L35 (2005). 3.1, 3.1, 3.2.3, 3.2.3
- [59] E. Fomouo, G. L. Kamta, G. Edah, and B. Piraux, *Phys. Rev. A* **74**, 063409 (2006). 3.1, 3.2, 3.1
- [60] D. A. Horner, F. Morales, T. N. Rescigno, F. Martín, and C. W. McCurdy, *Phys. Rev. A* **76**, 030701(R) (2007). 3.1, 3.1
- [61] R. Shakeshaft, *Phys. Rev. A* **76**, 063405 (2007). 3.1, 3.1
- [62] I. A. Ivanov and A. S. Kheifets, *Phys. Rev. A* **75**, 033411 (2007). 3.1, 3.1
- [63] L. A. A. Nikolopoulos and P. Lambropoulos, *J. Phys. B* **40**, 1347 (2007). 3.1, 3.2
- [64] E. Fomouo, P. Antoine, B. Piraux, L. Malegat, H. Bachau, and R. Shakeshaft, *J. Phys. B* **41**, 051001 (2008). 3.1
- [65] Y. Nabekawa, H. Hasegawa, E. J. Takahashi, and K. Midorikawa, *Phys. Rev. Lett.* **94**, 043001 (2005). 3.1
- [66] H. Hasegawa, E. J. Takahashi, Y. Nabekawa, K. L. Ishikawa, and K. Midorikawa, *Phys. Rev. A* **71**, 023407 (2005). 3.1, 3.2
- [67] A. A. Sorokin, M. Wellhöfer, S. V. Bobashev, K. Tiedtke, and M. Richter, *Phys. Rev. A* **75**, 051402(R) (2007). 3.1, 3.2

- [68] R. Nepstad, T. Birkeland, and M. Førre, Phys. Rev. A **81**, 063402 (2010). 3.2, 3.1, 3.2, 3.2.2
- [69] J. Feist, S. Nagele, R. Pazourek, E. Persson, B. I. Schneider, L. A. Collins, and J. Burgdörfer, Phys. Rev. A **77**, 043420 (2008). 3.1, 3.2, 3.2.1, 3.2.2, 3.2.4, 3.2.4
- [70] X. Guan, K. Bartschat, and B. I. Schneider, Phys. Rev. A **77**, 043421 (2008). 3.1, 3.2.2, 3.2.4
- [71] M. Førre, S. Selstø, and R. Nepstad, Phys. Rev. Lett. **105**, 163001 (2010). 3.1
- [72] A. Palacios, T. N. Rescigno, and C. W. McCurdy, Phys. Rev. A **79**, 033402 (2009). 3.1, 3.2.4
- [73] A. Palacios, D. A. Horner, T. N. Rescigno, and C. W. McCurdy, J. Phys. B **43**, 194003 (2010). 3.1
- [74] D. A. Horner, T. N. Rescigno, and C. W. McCurdy, Phys. Rev. A **81**, 023410 (2010). 3.1
- [75] L. Malegat, H. Bachau, B. Piraux, and F. Reynal, J. Phys. B **45**, 175601 (2012). 3.1
- [76] R. Nepstad and M. Førre, Phys. Rev. A **84**, 021402 (2011). 3.2.4
- [77] M. Born and R. Oppenheimer, Ann. Phys. **389**, 457 (1927). 4.1
- [78] B. Bransden and C. Joachain, *Physics of atoms and molecules, prentice hall* (2003). 1
- [79] M.-G. Baik, M. Pont, and R. Shakeshaft, Phys. Rev. A **54**, 1570 (1996). 4.2
- [80] H. Bachau, J. Phys. B **35**, 509 (2002). 4.2
- [81] G. L. Kamta and A. D. Bandrauk, Phys. Rev. A **71**, 053407 (2005). 4.2
- [82] S. Askeland (2013), project source code, URL https://github.com/sas044/H2plus_Born_Oppenheimer. 4.3
- [83] S. Laroche, A. Talebpour, and S.-L. Chin, J. Phys. B **31**, 1201 (1998). 6
- [84] R. Moshhammer, B. Feuerstein, D. Fischer, A. Dorn, C. Schroter, J. Deipenwisch, J. Lopez-Urrutia, C. Hohl, P. Neumayer, J. Ullrich, et al., Opt. Express **8**, 358 (2001). 6
- [85] H. E. Suess and H. C. Urey, Rev. Mod. Phys. **28**, 53 (1956). 6
- [86] A. Saenz, Phys. Rev. A **66**, 063407 (2002). 6