

## Complete Vitae

**Name: Chii-Dong Lin**

**Title: University Distinguished Professor**

**Associate Director of the J. R. Macdonald Laboratory**

Department of Physics, Kansas State University, Manhattan, KS 66502

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### **Education:**

Ph. D. University of Chicago, 1974

B. S. National Taiwan University, 1969

### **Experience:**

- University Distinguished Professor, 1990-present
- Center Fellow, National Center of Theoretical Sciences, Taiwan January-July 2004
- JILA-University of Colorado visiting fellow May-November 1995
- Visiting Professor, National Chiao-Tung University, Taiwan, Jan-July 1996
- Visiting Professor, National Taiwan University, Jan. 1987-July 1987
- Argonne Visiting Scientist, Sept. 1986-Jan. 1987
- Professor, Kansas State University, 1984-Present
- Associate Professor, Kansas State University, 1980-1984
- Assistant Professor, Kansas State University, 1976-1980
- Postdoctoral Fellow, Harvard University 1974-1976

### **Honors:**

- Outstanding Referee of the American Physical Society 2009
- Distinguished Visiting Scholar, RIKEN, Japan, December 1995
- NORDITA FELLOWSHIP 1990 summer
- Fellow, American Physical Society, 1986
- SLOAN FELLOWSHIP, 1979-83

## **Committees of Professional Organizations (since 2000 )**

- Organizing Committee, International Conference on few-body systems, 2000
- DAMOP Fellowship Committee, 2001-2003
- ISIAC Program committee 2004
- HCI program committee 2006-2009
- ICOMP Program Committee 2008
- Chair, 2<sup>nd</sup> International Conference of Attosecond Physics, held in Manhattan, Kansas State University 2009
- DAMOP Executive Committee (elected) 2009-2012

\*DAMOP: Division of Atomic, Molecular and Optical Physics of the American Physical Society

\* ISIAC: International Seminar of Ion-Atom Collisions

\* HCI: Highly Charged Ions Conference

\* ICOMP: International Conference on Multiphoton Processes

## **Research Grants (since 2000 )**

2000 DOE-JRM grant (\$290,000)

2001 DOE-JRM grant (\$290,000)

2002 DOE-JRM grant (\$280,000)

2003 DOE-JRM grant (\$280,000)

2004 DOE-JRM grant (\$280,000)

2005 DOE-JRM grant (\$280,000)

2006-2009 Total ( \$478,000/year)

DOE imaging grant \$148,000 (\$438,000 9/1/06-8/31/09, renewed)

DOE-JRM grant \$280,000

NSF \$50,000

\*DOE: US Department of Energy

\*DOE-JRM grant: DOE grant to the J. R. Macdonald (JRM) Laboratory is a block grant of \$2,500,000 per year. The cited amount is the portion allocated to my projects.

\*NSF: U.S. National Science Foundation

### **Books published:**

- *Review of Fundamental Processes and Applications of Atoms and Ions*, editor, World Scientific, 1993

### **Book Chapters Published:**

1. X. M. Tong and C. D. Lin , "Probing orbital symmetries and ionization dynamics of simple molecules with femtosecond laser pulses," in *ADVANCES IN MULTI-PHOTON PROCESSES AND SPECTROSCOPY, VOL 17*, Ed. S. H. Lin, A. A. Villaeys and Y. Fujimura, World Scientific, 2006.
2. C. D. Lin and F. Martin , "Slow and fast collisions of atoms, ions and molecules", in *Encyclopedia of Scattering and Inverse Scattering in Pure and Applied Science*, Eds. P. Sabatier and E.R. Pike, Academic Press, 2001.
3. C. D. Lin and Toru Morishita, "Visualization of electron correlations in doubly and triply excited states of atoms" in *Photodetachment and Photoionization, edited by C.Y. Ng, Part II*, pp1161-1203. World Scientific, Singapore, 1999.
4. C. D. Lin " Hyperspherical coordinate approach to Coulomb three-body systems", edited by C. Cisnero and T. Morgan. World Scientific, p.14 (1995).
5. C. D. Lin, "Classifications and Properties of Doubly excited states of atoms", in *Review of Fundamental Processes and Applications of Atoms and Ions* , edited by C. D. Lin, World Scientific Pub. (1993).
6. C. D. Lin, "Theoretical Studies of Heavy Particle Collisions," in *Fundamental Processes of Atomic Dynamics*, Plenum, 1988, edited by Briggs et al.,
7. C. D. Lin, "Classification of Doubly Excited States of Two-Electron Atoms," in *Fundamental Processes of Atomic Dynamics*, Plenum, 1988 edited by Briggs et al.,
8. C. D. Lin "The study of atomic three-body problems in hyperspherical coordinates, in *Few body methods: Principles and applications*, World Scientific, Singapore, (1986), edited by T. K. Lim, C. G. Bao, D. P. Hou and H. S. Huber.

## Review articles:

1. C. D. Lin, A. T. Le, Z. J. Chen and Toru Morishita, " Strong field rescattering physics - Self Imaging of molecules by their own electrons", to appear in J. Physics B, Atomic, Molecular and Optical Physics, Spring 2010.
2. C. D. Lin "Hyperspherical coordinate approach to atomic and Coulombic three-body systems", Phys. Rept. 257, 1-83 (1995).
3. W. Fritsch and C. D. Lin " Theory of ion-atom collisions- Coupled Channel Methods", Phys. Rept. 202, 1-97 (1991)
4. C. D. Lin "Doubly excited states, including new classification schemes," Advances in Atomic Mol. Phys., Vol. 22, 77-142 (1986)
5. C. D. Lin and P. Richard "Inner-Shell Vacancy Production in Ion-Atom Collisions," Adv. in Atomic Mol. Physics, Vol. 17, p. 275-348, (1981).

## Lifetime Research Concentrations:

Since 2002:

Ultrafast and strong field physics  
(Topical review, #1 above)

1990's and early 2000's: Ion-Atom Collisions and Hyperspherical Methods  
(Review Articles #2 and #3 above)

1970's and 1980's: Photoionization, Doubly Excited States of Atoms and Ion-Atom Collisions  
(Review Articles: #4 and #5 above)

## Invited Talks, Seminars and Colloquia (2005-2009)

- 2009 Invited: at Ultra-fast dynamics imaging, Ischia, Italy (4/29-5/3)  
Invited: at DAMOP meeting, Univ. of Virginia, Virginia (5/19-23)  
Seminar: University of Aarhus, Denmark (5/26)  
Invited: Atoms and Molecules in intense fields, Sandbjerg, Denmark(5/27/29)  
Invited: Super Intense Laser-Atom Physics 2009, Zion National Park, Utah (9/21-23)  
Seminar: National Research Council, Ottawa (10/23)  
Invited: Quantum Dynamic Imaging, Montreal, Canada (10/18-22)  
Seminar: Ohio State University (11/13)  
Seminar: SLAC and Stanford University (11/30)  
Invited chair: The future of ultrafast soft x-ray science, Berkeley (12/1-3)
- 2007 Colloquium: National Taiwan University, Taiwan (1/9)  
Seminar: National Chiao Tung University, Taiwan (1/11)  
Colloquium: National Central University, Taiwan (3/16)  
Seminar: Saclay, France (5/14)  
Seminar: Max Planck Institute, Heidelberg, Germany (5/23)  
Invited: German Society of Physics summer school, Bad Hoennef (5/20-25)  
Invited: Attosecond Physics, Dresden, Germany (8/1-5)  
Invited: Science for a New Class of soft X-ray light source, Berkeley (10/8-10)  
Colloquium: University of Nebraska (10/18)  
Seminar: University of Nebraska (10/19)
- 2006 Invited: AMO Theory workshop, Tsinghua University, Taiwan (1/9)  
Invited: PCPM2006, Tsukuba, Japan (1/17-19)  
Invited: Ultrafast dynamic imaging, Imperial College, London (4/9-11)  
Seminar: Vienna University of Technology, Vienna (6/10)  
Seminar: Max Planck Institute for complex systems, Dresden (6/13)  
Colloquium: Max Born Institute, Berlin (6/14)  
Invited: X-ray free-electron lasers, ITAMP, Harvard university (6/19-21)  
Invited: KITP-attosecond workshop, Santa Barbara, California (8/1-4)  
Invited: AMO summer school in Taiwan, Tsinghua, Taiwan (8/20-24)  
Seminar: National Chiao-Tung University, Taiwan (8/22)  
Invited: Optical Society Annual Meeting, Rochester, NY (10/8-12)
- 2005 Invited: Strong field attosecond physics, Obergurgl, Austria (1/13)  
Colloquium: University of Electrocommunications (1/18)  
Seminar: Riken, Japan (1/19)  
Invited: Atomic processes in intense laser fields (1/21)  
Invited: Canadian Association of Physicists Congress, Vancouver (5/19)  
Invited: ICOMP2005, Orford, Quebec, Canada (10/7-9)

# Publications and citation records

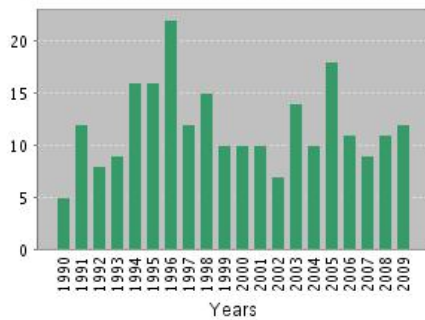
## Citation records:

(From ISI Web of Science 12/5/2009)

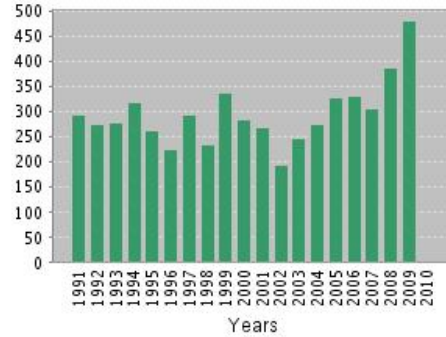
1. Total published refereed papers: **335**
2. Total citations: **7629**
3. H-index= **42**
4. Average citations per item=**22.64**

### Papers published since 1974

**Published Items in Each Year**

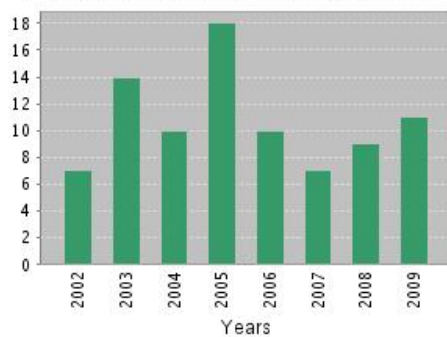


**Citations in Each Year**

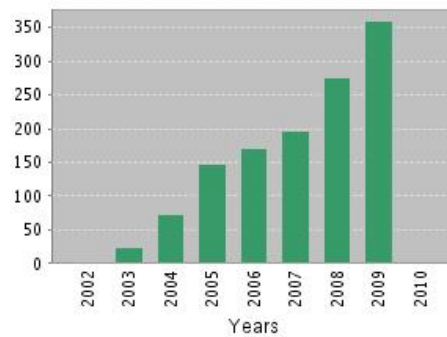


### Papers published since 2002

**Published Items in Each Year**



**Citations in Each Year**



## **Full Publication List in Refereed Journals (1974- 2009)**

336. Zhangjin Chen, T. Wittmann, B. Horvath and C. D. Lin, "Complete real-time temporal waveform characterization of single-shot few-cycle laser pulses", Phys. Rev. A80, 061402 (R) (2009).
335. Song-Feng Zhao, Cheng Jin, Anh-Thu Le, T. F. Jiang, and C. D. Lin, "Analysis of angular dependence of strong field tunneling ionization for CO<sub>2</sub>", Phys. Rev. A80, 051402(R) (2009).
334. Anh-Thu Le, R. R. Lucchese and C. D. Lin, "Uncovering multiple orbitals influence in high-harmonic generation from aligned N<sub>2</sub>", J. Phys. B.42, 211001 (2009) . fast track communication.
333. Anh-Thu Le, R.R. Lucchese, S. Tonzani, T. Morishita, C.D. Lin, " Quantitative rescattering theory for high-order harmonic generation from molecules", Phys. Rev. A80, 013401 (2009).
332. A. T. Le, R. R. Lucchese, M. T. lee and C. D. Lin, "Probing molecular frame photoionization via laser generated high-order harmonics from aligned molecules", Phys. Rev. Lett. 102, 203001 (2009).
331. Cheng Jin, A. T. Le and C. D. Lin, "Retrieval of target photo-recombination cross sections from high-order harmonics generated in a macroscopic medium", Phys. Rev. A79, 053413 (2009).
330. T. Morishita, M. Okunishi, K. Shimada, G. Prumper, Z. J. Chen, S. Watanabe, K. Ueda, and C. D. Lin, " Retrieval of experimental differential electron-ion elastic scattering cross sections from high-energy ATI spectra of rare gas atoms by infrared lasers", J. Phys. B. 42, 105205 (2009).
329. Junliang Xu, Hsiao-Ling Zhou, Zhangjin Chen and C. D. Lin, "Genetic-algorithm implementation of atomic potential reconstruction from differential electron scattering cross sections", Phys. Rev. A79, 052508 (2009).
328. Z. J. Chen, A. T. Le, Toru Morishita, and C. D. Lin, "Origin of species dependence of high-energy plateau photoelectron spectra", J. Phys B (fast track communications), J. Phys. B42, 061001 (2009).
327. Samuel Micheau, Zhangjin Chen, Toru Morishita, Anh-Thu Le and C. D. Lin, "Robust carrier-envelope phase retrieval of few-cycle laser pulses from high-energy photoelectron spectra in the above-threshold ionization of atoms", J. Phys. B42, 065402 (2009).

326. Zhangjin Chen, A. T. Le, T. Morishita and C. D. Lin, "Quantitative rescattering theory for laser-induced high-energy plateau photoelectron spectra", *Phys. Rev. A.* 79, 033409 (2009).
325. S. Micheau, Z. J. Chen, A. T. Le, J. Rauschenberger, M. F. Kling and C. D. Lin, "Accurate retrieval of target structure and laser parameters of few-cycle pulses from photoelectron momentum spectra", *Phys. Rev. Lett.* 102, 073001 (2009).
324. Samuel Micheau, Zhangjin Chen, Toru Morishita, Anh-Thu Le and C. D. Lin, "Quantitative rescattering theory for non-sequential double ionization of atoms by intense laser pulses", *Phys. Rev. A* 79, 013417 (2009)
323. A. T. Le, R. Della Picca, P. D. Fainstein, D. A. Telnov, M. Lein and C. D. Lin, "Ultrafast self-imaging of molecules under intense laser pulses", featured highlights from european Journals, *Europhysics news*, 39, 19 (2008).
322. A. T. Le, Toru Morishita, and C. D. Lin, "Extraction of the species-dependent dipole amplitude and phase from high-order harmonic spectra in rare gas atoms", *Phys. Rev. A* 78, 023814 (2008).
321. Junliang Xu, A. T. Le, T. Morishita and C. D. Lin, "Signature of Ericson fluctuations in helium inelastic cross sections near the double ionization threshold", *Phys. Rev. A* 78, 012701 (2008).
320. XiaoXin Zhou, Z. J. Chen, Toru Morishita, A. T. Le and C. D. Lin, "Retrieval of electron-atom scattering cross sections from laser-induced electron rescattering of atomic negative ions in intense laser fields", *Phys. Rev. A* 77, 053410 (2008).
319. A. T. Le, R. Della Picca, P. D. Fainstein, D. A. Telnov, M. Lein and C. D. Lin, "Theory of high-order harmonic generation from molecules with intense laser pulses", *J. Phys. B* 41, 081002 (2008) (Fast Track Communications) (selected in *J. Phys. B* 2008 highlights article)
318. V. H. Le, N. T. Nugen, C. Jin, A. T. Le and C. D. Lin, "Retrieval of interatomic separations of molecules from laser-induced high-order harmonic spectra", *J. Phys. B* 41, 085603 (2008).
317. D. Ray, B. Ulrich, I. Bocharova, C. Maharajan, P. Ranitovic, B. Gramkow, M. Magrakvelidze, S. De, I. V. Litvinyuk, A. T. Le, T. Morishita, C. D. Lin, G. G. Paulus and C. L. Cocke, "Large-angle electron diffraction structure in laser-induced rescattering from rare gases", *Phys. Rev. Lett.* 100, 143002 (2008)
316. M. Okunishi, T. Morishita, G. Prumper, K. Shimada, C. D. Lin, S. Watanabe and K. Ueda, "Experimental retrieval of target structure from laser induced rescattered photoelectron momentum distributions", *Phys. Rev. Lett.* 100, 143001 (2008).
315. Toru Morishita, A. T. Le, Z. J. Chen and C. D. Lin, "Potential for ultrafast dynamic chemical imaging with few-cycle infrared lasers", *New J. of Physics* 10, 025011 (2008)

314. Toru Morishita, A. T. Le, Z-J Chen, and C. D. Lin. "Accurate retrieval of structural information from laser-induced photoelectron and high-order harmonic spectra by few-cycle laser pulse", *Phys. Rev. Lett.* 100, 013903 (2008).
313. Z-J Chen, Toru Morishita, A. T. Le and C. D. Lin, "Analysis of two-dimensional high-energy photoelectron momentum distributions in single ionization of atoms by intense laser pulses", *Phys. Rev. A* 76, 043402 (2007)
312. V. H. Le, A. T. Le, R. H. Xie and C. D. Lin, "Theoretical analysis of dynamic chemical imaging using high-order harmonic generation", *Phys. Rev. A* 76, 013414 (2007)
311. A. T. Le, X. M. Tong and C. D. Lin, "Alignment dependence of high-order harmonic generation from CO<sub>2</sub>", *J. Mod. Optics*, 54, 967 (2007).
310. X. M. Tong and C. D. Lin, "Dynamics of light-field control of molecular dissociation at the single-cycle limit", *Phys. Rev. Lett.* 98, 123002 (2007).
- 309.. Toru Morishita, S. Watanabe and C. D. Lin, "Attosecond light pulses to reveal the time-dependent rovibrational motion of the correlated electron pairs in helium", *Phys. Rev. Lett.* 98, 083003 (2007)
308. X. M. Tong and C. D. Lin, "Carrier-envelope phase dependence of nonsequential double ionization of H<sub>2</sub> by few-cycle laser pulses", *J. Phys. B* 40, 641 (2007).
307. Toru Morishita, Z. Chen, S. Watanabe and C. D. Lin, " Two-dimensional electron momentum spectra of argon ionized by short intense lasers: Comparison of theory with experiment", *Phys. Rev. A* 75, 023407 (2007)
306. Z. Chen, Toru Morishita, A. T. Le, M. Wickenhauser, X. M. Tong and C. D. Lin, " Analysis of two-dimensional photoelectron momentum spectra and the effect of long-range Coulomb potential in single ionization of atoms by intense lasers", *Phys. Rev. A* 74, 053405 (2006).
305. M. Wickenhauser, X. M. Tong, D. G. Arbo, J. Burgdorfer and C. D. Lin, "Signature of multiphoton and tunneling ionization in the electron momentum distributions of atoms by intense few-cycle laser pulses", *Phys. Rev. A* 74, 041402(R), (2006).
304. C. D. Lin and X. M. Tong, "Dependence of tunneling ionization and harmonic generation on the structure of molecules by short intense laser pulses", *J. Photochemistry and Photobiology* 182, 213 (2006)
303. Patricia Barragan, Anh-Thu Le, and C.D. Lin, " Hyperspherical close-coupling calculations for electron-capture cross sections in low-energy Ne<sup>10+</sup> + H(1s) collisions," *Phys. Rev. A* 74, 012720 (2006).
302. X. M. Tong, Z. X. Zhao and C. D. Lin, Comment on "Correlation quantum dynamics between an electron and D<sub>2</sub><sup>+</sup> molecules with attosecond resolution", *Phys. Rev. Lett.* 97, 049301 (2006).

301. C. D. Lin, X. M. Tong and Toru Morishita, "Direct experimental visualization of atomic and electronic dynamics with attosecond pulses", J. Phys. B39, S419 (2006).
300. C. D. Lin and X. M. Tong, "Probing orbital symmetries and ionization dynamics of simple molecules with femtosecond laser pulses," in ADVANCES IN MULTI-PHOTON PROCESSES AND SPECTROSCOPY, VOL 17, Ed. S. H. Lin, A. A. Villaeys and Y. Fujimura, World Scientific, 2006.
299. X. M. Tong and C. D. Lin, "Attosecond xuv pulses for complete mapping of the time-dependent wave packet of  $D^{2+}$ ", Phys. Rev. A 73, 042716 (2006).
298. A. T. Le, X. M. Tong and C. D. Lin, "Evidence of two-center interference in high-order harmonic generation from  $CO_2$ ", Phys. Rev. A 73, 041402(R), (2006).
297. M. Wickenhauser, X. M. Tong and C. D. Lin, "Laser induced substructures in above-threshold-ionization spectra from intense few-cycle laser pulses", Phys. Rev. A 73, 011401(R) (2006).
296. C. D. Lin, X. M. Tong and Z. X. Zhao, "Effects of orbital symmetries on the ionization rates of aligned molecules by short intense laser pulses", J. of Mod. Optics 53, 21 (2006).
295. A. T. Le, Toru Morishita, X. M. Tong and C. D. Lin, "Signature of chaos in high-lying doubly excited states of the helium atom," Phys. Rev. A 72, 032511 (2005)
294. A. S. Alnaser, B. Ulrich, X. M. Tong, I. V. Litvinyuk, C. M. Maharjan, P. Ranitovic, T. Osipov, R. Ali, S. Ghimire, Z. Chang, C. D. Lin and C. L. Cocke, "Simultaneous real-time tracking of wave packets evolving on two different potential curves in  $H_2^+$  and  $D_2^+$ ," Phys. Rev. A 72, 030702(R) (2005).
293. X. X. Zhou, X. M. Tong, Z. X. Zhao and C. D. Lin, "Alignment dependence of high-order harmonic generation from  $N_2$  and  $O_2$  molecules in intense laser fields", Phys. Rev. A 72, 033412(R) (2005).
292. C. N. Liu, S. C. Cheng, A. T. Le and C. D. Lin, "Charge transfer in slow collisions of  $C^{6+}$  with H below 1 keV/amu", Phys. Rev. A 72, 012717 (2005).
291. X. M. Tong and C. D. Lin, "Empirical formula for static field ionization rates of atoms and molecules by lasers in the barrier-suppression regime", J. Phys. B 38, 2593 (2005).
290. Z. X. Zhao and C. D. Lin, "Theory of laser-assisted autoionization by attosecond light pulses", Phys. Rev. A 71, 060702(R) (2005).
289. C. D. Lin, A. T. Le, T. G. Lee and C. N. Liu, "New and old theoretical tools for evaluating cross sections for ion-atom collisions", in Atomic and Molecular Data and their applications, AIP conference proceedings, 771, 229 (2005).
288. X. X. Zhou, X. M. Tong, Z. X. Zhao and C. D. Lin, "Role of molecular orbital symmetry on the alignment dependence of high-order harmonic generation with molecules", Phys. Rev. A 71, 061801(R) (2005).

287. Z. X. Zhao, Z. H. Chang, X. M. Tong and C. D. Lin, "Circularly-polarized laser-assisted photoionization spectra of argon for attosecond pulse measurements", *Optics Express* 13, 1968 (2005).
286. A. T. Le and C. D. Lin, "Positronium formation in positron-Li and positron-Na collisions at low energies", *Phys. Rev. A* 71, 032713 (2005).
285. A. S. Alnaser, C. M. Maharjan, X. M. Tong, B. Ulrich, P. Ranitovic, B. Shan, Z. Chang, C. D. Lin and C. L. Cocke, "Effect of orbital symmetries in dissociative ionization of molecules by few-cycle laser pulses", *Phys. Rev. A* 71, 031403 (2005).
284. X. M. Tong and C. D. Lin, "Double photoexcitation of He atoms by attosecond XUV pulses in the presence of intense few-cycle infrared lasers", *Phys. Rev. A* 71, 033406 (2005).
283. A. T. Le and C. D. Lin, "Muon transfer from muonic hydrogen to atomic oxygen and nitrogen", *Phys. Rev. A* 71, 022507 (2005).
282. X. M. Tong, Z. X. Zhao, A. S. Alnaser, S. Voss, C. L. Cocke and C. D. Lin, "Post Ionization Alignment of fragmentation of molecules in an ultrashort intense laser field", *J. Phys. B* 38, 333 (2005).
281. Toru Morishita and C. D. Lin, "Hyperspherical analysis of radial correlations in four-electron atoms", *Phys. Rev. A* 71, 012504, (2005).
280. X. M. Tong, Z. X. Zhao and C. D. Lin, "Molecular Tunneling ionization and rescattering induced double ionization of H<sub>2</sub> molecules", *J. of Modern Optics* 52, 185 (2005).
279. A. S. Alnaser, X. M. Tong, T. Osipov, S. Voss, P. Ranitovic, B. Ulrich, B. Shan, Z. Chang, C. D. Lin and C. L. Cocke, "Routes to control of H<sub>2</sub> Coulomb Explosion in few-cycle laser pulses", *Phys. Rev. Lett.* 93, 183202 (2004)
278. S. Voss, A.S. Alnaser, X-M. Tong, C. Maharjan, P. Ranitovic, B. Ulrich, B. Shan, Z. Chang, C.D. Lin and C.L. Cocke, "High resolution kinetic energy release spectra and angular distributions from double ionization of nitrogen and oxygen by short laser pulses", *J. Phys. B* 37, 4239 (2004).
277. X. M. Tong and C. D. Lin, "Time-resolved sequential double ionization of D<sub>2</sub> molecules in an intense few-cycle laser pulse", *Phys. Rev. A* 70, 023406 (2004).
276. X. M. Tong and C. D. Lin, "How to read a molecular clock with sub-femtosecond accuracy", *Mod. Phys. Lett. B* 18, 1659 (2004).
275. A. T. Le, C. D. Lin, L. F. Errea, L. Mendez, A. Riera and B. Pons, "Comparison of hyperspherical vs. Common Reaction Coordinates Close-Coupling Methods for Ion-atom Collisions at Low Energies", *Phys. Rev. A* 69, 062703 (2004).
274. E. Edgu-Fry, A. Wech, J. Stuhlman, T. G. Le, C. D. Lin and C. L. Cocke, "Cold target recoil-ion momentum spectroscopy of capture from atomic and molecular hydrogen by O<sup>8+</sup> and Ar<sup>8+</sup>", *Phys. Rev. A* 69, 052714 (2004).

273. M. Hesse, A. T. Le and C. D. Lin, "protonium formation in pbar-H collision at low energies by a new diabatic approach", Phys. Rev. A 69, 052712 (2004)
272. Teck G. Lee, Anh-Thu Le and C. D. Lin, "Charge transfer in slow collisions of  $O^{8+}$  and  $Ar^{8+}$  with H below 1 keV/amu", Phys. Rev. A 70, 012702 (2004)
271. X. M. Tong and C. D. Lin, "Propensity rule for novel selective double photoexcitation of helium atoms in intense static electric fields", Phys. Rev. Lett. 92, 223003 (2004).
270. C. N. Liu, A. T. Le and C. D. Lin, "Charge transfer in slow collisions of  $C^{4+}$  with H below 1 keV/amu", Phys. Rev. A 68, 062702 (2003).
269. Z. X. Zhao, X. M. Tong and C. D. Lin, " Probing Molecular Dynamics at Attosecond Resolution with Femtosecond Laser Pulses", Phys. Rev. Lett. 91, 233203 (2003).
268. A. S. Alnaser, T. Osipov, E. P. Benis, A. Wech, C. L. Cocke, X. M. Tong and C. D. Lin, "Rescattering double ionization of  $D_2$  and  $H_2$  by intense laser pulses", Phys. Rev. Lett. 91, 163002 (2003).
267. X. M. Tong, Z. X. Zhao and C. D. Lin, "Correlation dynamics between electrons and ions in the fragmentation of  $D_2$  molecules by short laser pulses", Phys. Rev. A 68, 043412 (2003).
266. T. G. Lee, A. T. Le and C. D. Lin, "Charge transfer and excitation in slow 20 eV-2 keV  $H^+ + D(1s)$  collisions", J. Phys. B36, 4081 (2003).
- 265 A. T. Le, C. N. Liu and C. D. Lin, "Charge transfer in slow collisions between  $H^+$  with Na", Phys. Rev. A 68, 021705 (2003).
264. A. T. Le, M. Hesse, T. G. lee and C. D. Lin, "Hyperspherical close coupling calculations for charge transfer cross sections in  $Si^{4+} + H(D)$  and  $Be^{4+} + H$  collisions at low energies, J. Phys. B36, 3281 (2003).
263. C. N. Liu, A.T. Le, Toru Morishita, B. D. Esry and C. D. Lin, "Hyperspherical Close Coupling Calculations for Charge Transfer Cross Sections in  $He^{2+} + H(1s)$  Collisions at Low Energies", Phys. Rev. A67, 051801 (2003)
262. M. Zamkov, E. P. Benis, C. D. Lin, T. Morishita, P. Richard, T. G. Lee and T. J. M. Zouros, "Experimental observation and theoretical calculations of triply excited  $2s2p^2$  (S, P, D) and  $2p^3$ (P,D) states of fluorine", Phys. Rev. A 67, 050703(2003).
261. H. Merabet, R. Bruch, J. Hanni, M. Bailey, A. L. Godunov, J. H. McGuire, D. V. Fursa, I. Bray, K. Bartschat, H. C. Tseng and C. D. Lin, "Scattering angle-integrated(total) and magnetic sublevel cross sections and degree of linear polarization for electron and proton induced excitation to  $He(1snp)$  ( $n=2-5$ )," Atomic Data and Nucl Data Tables 83, 45 (2003).
260. Z. X. Zhao, X. M. Tong and C. D. Lin, "Determination of the alignment dependent ionization probability of molecules in a double pulse laser experiment", Phys. Rev. A 67, 043404 (2003).

259. X. M. Tong, Z. X. Zhao and C. D. Lin, "Abnormal pulse duration dependence of ionization probability of Na atoms in intense laser fields", *J. Phys.*B36, 1121(2003).
258. Toru Morishita and C. D. Lin, "Radial and Angular Correlations and the classification of intershell 2l2l'3l' triply excited states of atoms", *Phys. Rev. A*67, 022511 (2003) .
257. Bing Shan, X. M. Tong, Z. X. Zhao, Z.H. Chang and C. D. Lin, "High Harmonic cutoff extension of molecules due to ionization suppression", *Phys. Rev. A* 66, 061401 (2002).
256. T. G. Lee, H. Nguyen, X. Flechard, B. D. DePaola and C. D. Lin, "Differential charge-transfer cross sections for  $\text{Na}^+$  with Rb collisions at low energies", *Phys. Rev. A* 66, 042701 (2002).
255. T. Y. Shi and C. D. Lin, " Double photoionization and transfer ionization of He: Shakeoff theory revisited", *Phys. Rev. Lett.* 89, 163202 (2002).
254. X. M. Tong, Z. X. Zhao and C. D. Lin, "Theory of molecular tunneling ionization", *Phys. Rev. A*66, 033402 (2002).
253. E. Edgu-Fry, C. L. Cocke, E. Sidky, C. D. Lin and M. Abdallah, "Intermediate Energy ionization of Helium by proton Impact", *J. Phys. B*35, 2603 (2002).
252. C. D. Lin and Ingrid Reiser, "Alignment-dependent Atomic Model for Electron Transfer in Ion-Molecule collisions", *Int. J. Mol. Sci.* 3, 132-141 (2002).
251. Z. X. Zhao, B. D. Esry and C. D. Lin, "Boundary-free scaling calculation of the time-dependent Schroedinger equation for laser-atom interactions ", *Phys. Rev. A*65, 023402 (2002).
250. Emil Y. Sidky and C. D. Lin, "cross section calculations on proton-impact ionization of hydrogen" *Phys. Rev. A*65, 012711 (2002).
249. B. D. Esry, C. D. Lin, C. H. Greene and D. Blume, " Comments on "Efimov states for  $^4\text{He}$  trimers?" *Phys. Rev. Lett* 86, 4189 (2001).
248. Toru Morishita and C. D. Lin , "Classification and rovibrational normal modes of 3l3l'3l' triply excited states of atoms", *Phys. Rev. A* 64, 052502 (2001).
247. Xiaoxin Zhou, Baiwen Li and C. D. Lin, "Linear-least-squares-fitting procedure for the solution of time-dependent wavefunction of a model atom in a strong laser field in the Kramers-Henneberger frame ", *Phys. Rev. A* 64, 043403 (2001).
246. H. Merabet, M. Bailey, R. Bruch, J. Hanni, S. Bliman, D. V. Fursa, I. Bray, K. Bartschat, H. C. Tseng, and C. D. Lin, " Cross sections and collision dynamics of the excitation of (1snp)1Po levels of helium, n=2-5, by intermediate- and high-velocity electron, proton and molecular ion ( $\text{H}_2^+$  and  $\text{H}_3^+$ ) impact", *Phys. Rev. A*64, 012712 (2001).
245. C. D. Lin and F. Martin, "Slow and fast collisions of atoms, ions and molecules", a chapter in *Encyclopedia of Scattering*, Academic Press.
244. C. D. Lin and Toru Morishita, "Few-body problems: the hyperspherical way", *Physics Essays*, 13, 367 (2001). special issue for Fano, edited by A. R. P. Rau and M. Inokuti.

243. Chien-Nan Liu, Ming-Keh Chen, and C.D. Lin, " Radiative Decay of Helium Doubly Excited States", Phys. Rev. A64, 01050(R), 2001. [Rapid Commu.]
242. H. Merabet, A. Siems, R. Bruch, J. Hanni, M. Bailey, H. C. Tseng, C. D. Lin, and A. G. Trigueiros, "Investigation of Excitation and Ionization-excitation of He following electron and proton impact using EUV Polarimetry ", Proc. SPIE, Vol.4139, 81 B34, L203 (2000).
241. Teck Lee, Brett Esry and C. D. Lin, "Helium trimer has no bound rotational excited states", J. Phys. B34, L203 (2001).
240. Emil Sidky, Clara Illescas and C. D. Lin, "The role of potential Saddle in  $\alpha + H$  impact ionization", J. Phys. B34, L163 (2001).
239. C.Y. Chen, C.L. Cocke, J.P. Giese, F. Melchert, M. Stockli, E. Sidky and C. D. Lin, "Studies of charge exchange in symmetric ion-ion collisions", J. Phys. B34, 469 (2001).
238. Toru Morishita and C. D. Lin, " Identification and visualization of the collective normal modes of intrashell triply excited states of atoms", J. phys. B34, L105 (2001).
237. A. Amaya-Tapia and H. Martínez, R. Hernández-Lamoneda and C. D. Lin, "Charge transfer in  $H^+ + Ar$  collisions from 10 to 150 keV", Phys. Rev. A 62, 052718 (2000).
236. C. D. Lin and Toru Morishita, "Visualization of electron correlations in doubly and triply excited states of atoms" Book chapter, Photodetachment and Photoionization, edited by C.Y. Ng, Part II, pp1161-1203. World Scientific, Singapore, 1999.
235. Emil Sidky, Clara Illescas and C. D. Lin, "Electrons ejected with half the projectile velocity and the saddle point ionization mechanism", Phys. Rev. Lett. 85, 1634 (2000).
234. Z.X. Zhao, A. Igarashi and C. D. Lin, "Hyperspherical calculations of  $H(1s) + \mu^+$  rearrangement collision cross sections", Phys. Rev. A62, 042706 (2000).
233. B.B. Dhal, Lokesh C. Tribedi, U. Tiwari, P.N. Tandon, T. G. Lee, C.D. Lin and L. Guly'as, "Single K-K electron transfer and K-ionization cross sections in collisions of highly charged C,O,F,S,Cl ions with Ar and Kr", Phys. Rev. A62, 022714 (2000).
232. Xiaoxin Zhou and C. D. Lin, "Time-dependent Approach to Laser-Atom Interactions by the Least Squares Fitting Techniqu", Phys. Rev. A61, 053411 (2000).
231. B. B. Dhal, L. C. Tribedi, U. Tiwari, P. N. Tandon, T. G. Lee, C. D. Lin and L. Gulyas, " Strong double K-K transfer channel in near symmetric collision of  $Si + Ar$ ", J. Phys. B33, 1069 (2000).
230. T. G. Lee, H. C. Tseng and C. D. Lin, " Evaluation of antiproton impact ionization of He atoms below 40 keV", Phys. Rev. A61, 062713(2000).
229. H. C. Tseng and C. D. Lin, "Total and State-selective Electron Capture Cross Sections for  $B^{4+} + H$  collisions", Phys. Rev. A61, 034701 (2000).

228. Akinori Igarashi and C. D. Lin, "Full ambiguity-free quantum treatment of  $D^+ + H(1s)$  charge transfer reactions at low energies", Phys. Rev. Lett. 83, 4041 (1999).
227. H. C. Tseng and C. D. Lin, "Total and State-Selective Electron Capture Cross Sections for  $C^{3+} + H$  Collisions", J. Phys. 32, 5271 (1999).
226. Yong Li and C. D. Lin, "Calculations of the binding energies of weakly bound He-He-H, He-He-H<sup>-</sup> and He-H-H molecules", J. Phys. B32, 4877 (1999).
225. Yong Li and C. D. Lin, "Calculations of some weakly-bound diatomic molecular negative ions", Phys. Rev. A60, 2009 (1999).
224. H. C. Lee, H. C. Tseng and C. D. Lin, "Electron Capture Cross Sections in  $N^{4+} + H$  Collisions", Chinese J. Phys. 37, 380 (1999).
223. C. D. Lin and T. Morishita, "Visualization of correlations in intrashell triply excited states of atoms", J. Phys. IV France 9, Pr6-25 (1999).
222. E. Sidky and C. D. Lin, "Impact Velocity Dependence of Ejected Electron distributions for ionization in Proton-Hydrogen Collisions", Phys. Rev. A60, 377 (1999).
221. Emil Sidky, Wolfgang Fritsch and C. D. Lin, "Total and state-selective electron capture cross sections for  $N^{4+} - H$  collisions", Phys. Rev. A59, 1994 (1999).
220. Toru Morishita and C. D. Lin, "Comprehensive analysis of electron correlations in three-electron atoms", Phys. Rev. A59, 1835 (1999).
219. D.M. Homan, O.P.Makarov, O.P.Sorokina, K.B.MacAdam, M.F.V.Lundsgaard, C.D.Lin and N.Toshima "Electron Capture from a Directed Stark-Rydberg State. I. Fore-and-Aft Ratios", Phys. Rev. A58, 4565 (1998).
218. Lokesh C. Tribedi, P. Richard, Y. D. Wang, C. D. Lin, R. E. Olson et al., "Ionization dynamics in fast ion-atom collisions. II. Final-state momentum distributions of the ionization products in collisions of He with bare carbon ions", Phys. Rev. A58, 3626 (1998).
217. Lokesh C. Tribedi, P. Richard, Y. D. Wang, C. D. Lin, L. Gulyas et al., "Ionization dynamics in fast ion-atom collisions. I. Energy and angular distributions of low-energy electrons emitted in ionization of He by bare carbon ions", Phys. Rev. A58, 3619 (1998).
216. Toru Morishita, Yong Li and C. D. Lin, "Visualization of correlations in intrashell triply excited states of atoms", Phys. Rev. A58, 4214 (1998).
215. Jianmin Yuan and C D Lin, "Effect of Core-valence electron correlation in low-energy electron scattering with Ca atoms", Phys. Rev. A58, 2824 (1998).
214. H-C Tseng and C. D. Lin, "Reevaluation of Electron Capture Cross Sections in  $C^{4+} + H$  Collisions", Phys. Rev. A58, 1966 (1998).
213. Jianmin Yuan and C D Lin, "Weakly-bound triatomic He<sub>2</sub>Li and He<sub>2</sub>Na molecules", J. Phys. B31, L637(1998).

212. Jianmin Yuan, B.D. Esry, Toru Morishita, and C. D. Lin, "Stable bound states of  $e^+ + \text{Li}$  and  $e^+ + \text{Na}$ ", Phys. Rev. A58, R4 (1998).
211. Emil Y Sidky and C D Lin, "Quantum Mechanical Calculation of Ejected Electron Spectra for Ion-Atom Collisions", J. Phys. B31, 2949 (1998).
210. K.T. Chung and C. D. Lin, "2l2l' and 3l3l' doubly excited states of  $\text{Li}^+$ ", Atomic and Nuclear Data Tables, 69, 101-124 (1998).
209. M. A. Abdallah, W. Wolff, H. E. Wolf, E. Sidky, E. Y. Kamber, M. Stockli, C. D. Lin and C. L. Cocke, "Cold-target recoil-ion-momentum spectroscopy study of single electron capture from He by slow  $\text{Ar}^{8+}$  ions", Phys. Rev. A57, 4373 (1998).
208. Toru Morishita and C. D. Lin, "Hyperspherical analysis of doubly and triply excited states of Li," Phys. Rev. A57, 4268 (1998).
207. C Balanca, C D Lin and N Feautrier, "Differential cross sections and polarization in  $\text{H}^+ + \text{H}$  collisions [D.C.S. and polarization in  $\text{H}^+ + \text{H}$  collisions]", J. Phys. B31, 2321 (1998).
206. Toru Morishita and C. D. Lin Analysis of 1s2l2l' and 2l2l'2l' resonances of  $\text{He}^-$  ions J. Phys. B31, L209 (1998).
205. Toru Morishita, C. D. Lin and C. G. Bao, "On the nonexistence of resonances in  $\text{H}^{2-}$ ", Phys. Rev. Lett. 80, 464 (1998).
204. F Melchert, S Meuser, S Krüdener, A Pfeiffer, K v Diemar, E Salzbom, E Sidky and C D Lin "Charge transfer in  $\text{C}^{3+} + \text{He}^{2+}$  collision J. Phys. B30, L697 (1997).
203. Ming-Keh Chen, C. D. Lin and J. Z. Tang, "Accurate hyperspherical close-coupling calculation of electron-hydrogen scattering cross sections", Phys. Rev. A56, 2435 (1997).
202. C. D. Lin, "The stability of simple quantum systems", Chinese J. Physics, 35, 462 (1997).
201. J. T. Lin, T. F. Jiang, J. Y. Kuang, C. D. Lin "Electron detachment of  $\text{H}^-$  in collision with  $\text{Ne}^{4+}$  and  $\text{Ar}^{4+}$  ions", Phys. Rev. A56, 2020 (1997).
200. I. Ben-Itzhak, J. P. Bouhnik, Z. Chen, B. D. Esry, I. Gertner, C. Heinemann, W. Koch, C. D. Lin, B. Rosner "Mean lifetime measurements and calculations of long-lived  $\text{HeNe}^{2+}$  isotopes," Phys. Rev. A56, 1268 (1997).
199. C. G. Bao X. Z. Yang and C. D. Lin, "Nodal Structures of Intrashell States of 3-Valence-Electron Atoms," Phys. Rev. A55, 4168 (1997).
198. Jiyun Kuang and C. D. Lin, "Molecular Integrals over spherical Gaussian-type orbitals: II. Modified with plane-wave phase factors", J. Phys. B30, 2549 (1997).
197. Jiyun Kuang and C. D. Lin, "Molecular Integrals over spherical Gaussian-type orbitals: I", J. Phys. B30, 2529 (1997).
196. C. D. Lin, "Helium atom as viewed under synchrotron radiation", Wu-Li bimonthly, 18, 649 (1996). In Chinese.

195. Jiyun Kuang and C. D. Lin, "Convergent two-center close coupling calculations for electron transfer, excitation and ionization in intermediate keV  $\text{He}^{2+}$ -H collisions, J. Phys. B30, 101 (1997).
194. E.C. Montenegro, K. L. Wong, W. Wu, P. Richard, I. Ben-Itzhak, C. L. Cocke, R. Moshhammer, J. P. Giese, Y. D. wang and C.D. Lin, "Projectile charge state dependence of transfer ionization to single capture ratio in collisions of multiply charged ions with He", Phys. Rev. A55, 2009 (1997).
193. T. F. Jiang and C. D. Lin, "Ionization of Oriented Elliptic Rydberg States by Half-cycle Pulses", Phys. Rev. A55, 2172 (1997).
192. J. T. Lin, T. F. Jiang and C. D. Lin, "Coulomb Trajectory Effects on Electron-Impact Detachment of Negative Ions and on Mutual Neutralization cross sections," J. Phys. 29, 6175 (1996).
191. Jiyun Kuang and C. D. Lin, "Two-center exchange integrals over complex STOs with Plane-wave ETF", J. Phys. B29, L889(1996).
190. Wolfgang Fritsch and C.D. Lin, "A Study of One- and Two-Electron Transitions in Slow  $\text{C}^{5+}$ -- He Collisions: Total and Angle- differential Cross Sections and Coherence Parameters", Phys. Rev. A54, 4931 (1996).
189. Jiyun Kuang and C. D. Lin, " Comprehensive convergence tests of two-center AO close-coupling calculations for the excitation and ionization of atomic hydrogen by keV protons", J. Phys. B29, 5443 (1996).
188. S. Kato, J. de Gouw, C. D. Lin, V. M. Bierbaum and S. R. Leone " Vibrational enhancement of the charge transfer rate constant of  $\text{N}_2^+$  ( $v=0-4$ ) with Kr at thermal energies", J. Chem. Phys. 13, 5455 (1996).
187. S. Kato, J. de Gouw, C. D. Lin, V. M. Bierbaum and S. R. Leone "Charge transfer rate constants for  $\text{N}_2^+$  ( $v=0-4$ ) with Ar at thermal energies", Chem. Phys. Lett. 256, 305 (1996).
186. Lokesh C. Tribedi, P. Richard, D. Ling, Y.D. Wang and C.D. Lin, R. Moshhammer, G.W. Kerby III, M.W. Gealy and M.E. Rudd, "Doubly differential cross sections of soft electrons emitted in ionization of molecular hydrogen by bare Carbon ions," Phys. Rev. A54, 2154 (1996).
185. Lokesh C. Tribedi, P. Richard, Y.D. Wang and C.D. Lin, "Doubly differential final-state momentum distributions of the ionization products in collision of bare ions with hydrogen," Phys. Rev. Lett. 77, 3767 (1996).
184. Y.D. Wang, Lokesh C. Tribedi, P. Richard, C.L. Cocke V.D. Rodriguez and C. D. Lin, "On the connection between the longitudinal recoil-ion momentum distribution and the electron doubly differential cross section in ion-atom ionization", J. Phys. B29, L203 (1996).
183. S.D. Kravis, M. Abdallah, C.L. Cocke, C.D. Lin, M. Stockli, B. Walch and Y.D. Wang, V.D. Rodriguez, W. Wu and M. Pieksma, N. Watanabe Single ionization of He by low velocity protons and  $\text{C}^{6+}$ : Ejected electron momentum distributions Phys. Rev. A 54, 1394 (1996).

182. Xiazhou Yang, C. G. Bao and C. D. Lin "Hyperspherical approach to three-electron atomic systems", Phys. Rev. A53, 3934 (1996).
181. Y.D. Wang, N. Toshima, and C.D. Lin "One- and two-electron processes in collisions of He with 10-500 keV/amu  $\text{Be}^{q+}$  ( $q=2-4$ ) and  $\text{B}^{q+}$  ( $q=2-5$ ) ions", Phys. Scripta. T62, 63 (1996).
180. Yan Zhou and C. D. Lin "Hyperspherical Close-Coupling Calculation of D-wave Positronium Formation and Excitation Cross Sections in Positron-Hydrogen Scattering", Can. J. Phys. 74, 353 (1996).
179. B.D. Esry, C.D. Lin and Chris H. Greene "An adiabatic hyperspherical study of the helium trimer" Phys. Rev A54, 394 (1996).
178. Y.D. Wang, V.D. Rodriguez, C.D. Lin, C.L. Cocke, S. Kravis, M. Abdallah and R. Dorner "Analysis of final-state momentum distributios of ionization products in ion-atom collisions", Phys. Rev. A53, 3278 (1996).
177. C. D. Lin, "Theory of two-center effects in atomic collisions: A critical evaluation", AIP Conference Proceedings 362, Woodbury, New York. p. 135 (1996).
176. Xiazhou Yang, C. G. Bao and C. D. Lin "Analysis of Triply Excited States of Atoms in Hyperspherical Coordinates", Phys. Rev. Lett. 76, 3096 (1996).
175. Jiyun Kuang and C. D. Lin, "On the convergence of two-center AO close-coupling method in ion-atom collisions", J. Phys. B29, 1207 (1996).
174. C. D. Lin, "Hyperspherical way for Coulomb few-body systems", Comments AMO Phys 32, 127 (1996).
173. Y.D. Wang, W.C. Fon, B.R. Odgers and C.D. Lin "A benchmark calculation for resonant electron-hydrogen elastic scattering at low energies", J. Phys. B29, L59 (1996).
172. M. F. V. Lundsgaard, N. Toshima and C.D. Lin "Dependence of Electron Loss Cross Sections on the Orientation and Alignment of Elliptic Rydberg States", J. Phys. B29, 1045 (1996).
171. B. D. Esry, Chris H. Greene, Y. Zhou and C. D. Lin "Role of the scattering length in Bose-Einstein condensation" J. Phys. B29, L51 (1996).
170. Yan Zhou and C. D. Lin "Hyperspherical Close-Coupling Calculation of Positronium Formation and Excitation Cross Sections in Positron-Hydrogen Scattering at Energies below the  $H(n=4)$  Threshold", J. Phys. B28, 4907 (1995).
169. I Benitzhak, JP Bouhnik, Z Chen, I Gertner, C Heinemann, C Heinemann, W Koch, CD Lin, B Rosner "Isotopic effect of the mean lifetimes of the  $\text{NeAr}^{2+}$  doubly charged rare-gas dimer", Phys. Rev. A52, R3401 (1995).
168. C. D. Lin "Hyperspherical coordinate approach to Coulomb three-body systems", edited by C. Cisneros and T. Morgan. World Scientific, p.14 (1995).

167. C.G. Bao and CD Lin "Effect of Quantum Mechanical Symmetry on Electron Correlations in Intrashell States of 3-valence-electron Atoms", Phys. Rev. A52, 3586 (1995).
166. Y. D. Wang, C. D. Lin, N. Toshima and Z. Chen, "Ionization and charge transfer in collision of highly charged ions with helium at low velocity", Phys. Rev. A52, 2852 (1995).
165. V.D. Rodriguez, Y.D. Wang and C.D. Lin "Longitudinal momentum distributions in ionization of helium by fast, highly charged projectiles", J. Phys. B28, L471 (1995).
164. V.D. Rodriguez, Y.D. Wang and C.D. Lin "Theory of longitudinal recoil-ion momentum distribution in ion-atom ionization", Phys. Rev. A52, R9 (1995).
163. Xiazhou Yang, Jinhua Xi, C. G. Bao and C. D. Lin "Analysis of Hyperspherical Channels of Three-electron Atomic Systems", Phys. Rev. A52, 2029 (1995).
162. Yan Zhou and C. D. Lin "Comparative Studies of Excitations and Resonances in  $H$ ,  $Ps^-$  and  $e^+ + H$  Systems", Phys. Rev. Lett. 75, 2296 (1995).
161. Yan Zhou and C. D. Lin "On the Nonexistence of Resonances Above the Ionization Threshold in Positron-Hydrogen Scattering", J. Phys. B28, L519 (1995).
160. Jiyun Kuang, Z. Chen and C. D. Lin, "Excitation and Charge Transfer in  $He^+ + H$  collisions", J. Phys. B28, 11 (1995).
159. J. Z. Tang, C. D. Lin, B. Zhou and Isao Shimamura "Resonances in photodetachment of  $H$  ( $2p^2\ ^3P^e$ )", Phys. Rev. A51, 4694 (1995).
158. C. D. Lin "Hyperspherical coordinate approach to atomic and Coulombic three-body systems", Phys. Rept. 257, 1 (1995).
157. M. F. V. Lundsgaard, Z. Chen and C.D. Lin "Electron capture in  $K^+$  ion collisions with  $Na(4d)$ ", J. Phys. B28, 907 (1995).
156. I. Ben-Itzhak, Z. Chen, and C.D. Lin "Scaling of mean lifetimes of metastable molecular states with angular momentum and vibrational quantum numbers" Phys. Rev. A51, 2619 (1995).
155. M. Lundsgaard, Z. Chen, C. D. Lin and N. Toshima, "Electron capture from Circular Rydberg States," Phys. Rev. A51, 1347 (1995).
154. Bin Zhou and C. D. Lin "Photoionization of Beryllium atom" Phys. Rev. A51, 1286 (1995).
153. Jiyun Kuang, Z. Chen and C. D. Lin "A Perturbation/Close-Coupling Method for Inelastic Processes in Ion-Atom Collisions" J. Phys. B27, 5731 (1994).
152. Z. Chen and CD Lin "Close-coupling calculations of alignment parameters in  $p+Mg(2p)$  collisions", Phys. Lett. A194, 201 (1994).
151. Yan Zhou and C. D. Lin "Hyperspherical Close-Coupling Calculation of Positronium Formation Cross Sections in Positron-Hydrogen Scattering at Low Energies" J. Phys. B27, 5065 (1994).

150. M. F. V. Lundsgaard, N. Toshima, Z. Chen and C.D. Lin "Electron Capture from Elliptical Rydberg States" J. Phys. B27, L611 (1994).
149. C. D. Lin and N. Toshima "Selectivity of Electron Capture Probabilities on the Initial State" Zeit. Physik D30, 189 (1994).
148. Z. Chen and C. D. Lin, and N. Toshima "Calculations of Q values in single and double charge transfer collisions of highly charged ions with atoms" Phys. Rev. A50, 511 (1994).
147. Bao Cheng-Guang and C.D. Lin "Hyperspherical Approach to Three-Electron Atomic Systems Few-body systems", 16, 47 (1994).
146. Z Chen, B D Esry, C D Lin and R D Piacentini "Excitation and Ionization of H(2s) by proton impact" J. Phys. B27, 2511 (1994).
145. Z. Chen, I. Ben-Itzhak, and C.D. Lin, W. Koch, G. Frenking, I. Gertner and B. Rosner "Mean lifetime calculations of the metastable doubly charged NeAr<sup>2+</sup> rare gas dimer", Phys. Rev. A49, 3472 (1994).
144. C.G. Bao, W.F. Xie and C. D. Lin "Symmetry and Low-lying Intrashell States of Three-electron Atoms", J. Phys. B27, L193 (1994).
143. C. D. Lin, N. Toshima and W. Fritsch "Alignment and Orientation in Atomic Collisions" Nucl. Instr. Methods, B86, 12-19 (1994).
142. I. Ben-Itzhak, Z. Chen, B. Esry, I. Gertner, O. Heber, C. D. Lin, and B. Rosner "The mean lifetime of the bound 2p state of HeH<sup>2+</sup>", Phys. Rev. A49, 1774 (1994).
141. Bin Zhou and C. D. Lin "Photoionization from metastable (1s2s) <sup>1</sup>S<sup>e</sup> and <sup>3</sup>S<sup>e</sup> states of He atom for energies between the N=2 and 3 thresholds of He<sup>+</sup>", Phys. Rev. A49, 1057 (1994).
140. L. C. Tribedi, K. G. Prasad, P. N. Tandon, Z. Chen and C. D. Lin "Single and double K-shell ionization and electron transfer cross-sections for Fe and Ni bombarded by Si and Fe by S ions at 1.25- 4.50 MeV/amu", Phys. Rev. A49, 1015 (1994).
139. N Toshima, CD Lin "Dependence of Electron-Capture Probabilities on the Initial-State Magnetic Quantum Numbers in Ion-Atom Collisions", Phys. Rev. A49, 397 (1994).
138. C. D. Lin "Classifications and Properties of Doubly excited states of atoms a chapter in the book "Review of Fundamental Processes and Applications of Atoms and Ions", edited by C. D. Lin, World Scientific Pub. (1993)
137. Yan Zhou, C. D. Lin and J. Shertzer "Hyperspherical approach to Coulombic three-body systems with different masses", J. Phys. B26, 3937 (1993).
136. B Zhou, CD Lin, JZ Tang, S Watanabe, M Matsuzawa "Enhancement of narrow resonances in photoabsorption from he atom in metastable states", J. Phys. B26, L337 (1993).
135. B Zhou, CD Lin " A Hyperspherical Close-Coupling Calculation of Photoionization from the He Atom, Li<sup>+</sup> and C<sup>4+</sup> Ions .2. Between the N=2 and N=3 Thresholds", J. Phys. B26, 2575 (1993).

134. B Zhou, CD Lin, JZ Tang, S Watanabe, M Matsuzawa "A Hyperspherical Close-Coupling Calculation of Photoionization from the He Atom,  $\text{Li}^+$  and  $\text{C}^{4+}$  Ions .1. Below the  $N = 2$  Threshold", J. Phys. B26, 2555-2573 (1993).
133. Z Chen, CD Lin "Double Electron Capture and the Angular Distribution of Ejected Electrons in  $\text{Ne}^{8+}$ -He Collisions Phys. Rev. A48, 1298-1307(1993).
132. N Toshima, CD Lin "Propensity Rules for Magnetic-Substate Distributions for Electron Capture from Excited States of Atoms by Multiply Charged Ions", Phys. Rev.A 47, 4831-4836 (1993).
131. BD Esry, Z Chen, CD Lin, RD Piacentini "Close-Coupling Calculations of Electron Capture Cross Sections from the  $n = 2$  States of H by Protons and alpha-Particles", J. Phys. B26 (1993), 1579-1586.
130. Z Chen, CD Lin, "Fluorescence Yields of High-Lying Doubly Excited States of  $\text{Ar}^{16+}$ ," J. Phys. B26 (1993) 957-963.
129. CD Lin Classification of Highly Correlated Electronic States Physica Scripta T46, 65-74 (1993)
128. B. Zhou and C. D. Lin " Shifts of photodetachment thresholds and induced shape resonances in  $\text{H}^-$  in an electric field", Phys. Rev. Lett. 69, 3294 (1992).
127. M. Lundsgaard and C. D. Lin " Reduced Close-coupling calculations for electron capture processes in collisions of multiply charged ions with atoms", J. Phys. B25, L429 (1992).
126. J. Z. Tang, S. Watanabe, M. Matsuzawa and C. D. Lin Evidence of an excited angular correlation mode in high-lying  $\text{He}^{**}$ " Phys. Rev. Lett. 69, 1633 (1992).
125. J. Q. Sun and C. D. Lin "Diabatic States in the avoided-cross region", J. Phys. B25, 1363 (1992).
124. J. Q. Sun and C. D. Lin " A single channel quantum defect theory for the description of doubly excited states of helium", Phys. Rev. A.46, 5489 (1992).
123. N. Toshima, R. Shingal and C. D. Lin " Orientation parameters and dipole moments of  $\text{He}^+$  ( $n=2$ ) states in  $\text{He}^{2+} + \text{H}$  collisions: Comparison of CTMC and close-coupling results", J. Phys. B25, L11 (1992).
122. C. D. Lin, Z. Chen and R. Shingal " Ejected electron spectra of doubly excited states from double capture in collisions of bare ions with helium atoms", invited talk for the XVII ICPEAC, Brisbane, Australia, 1991.
121. W. Fritsch and C. D. Lin " One- and two-electron capture in collisions of slow  $\text{B}^{3+}$  and  $\text{Be}^{4+}$  with helium", Phys. Rev. A45, 6411 (1992).
120. W. Fritsch, R. Shingal and C. D. Lin "Close-coupling Study of Electron Excitation in 1-300 keV/u  $\text{He}^{++}$ -H collisions", Phys. Rev. A44, 5686 (1991).

119. Z. Chen, C.-G. Bao and C. D. Lin " Analysis of the Projection of the Total Orbital Angular Momentum along the Interelectronic Axis for Doubly Excited States of Atoms", J. Phys. B25, 61 (1992).
118. X. H. Liu, Z. Chen and C. D. Lin "Demonstration of Molecule-like Normal Modes of Coulombic Three-body Systems in Hyperspherical Coordinates", Phys. Rev. A44, 5468 (1991).
117. Z. Chen, D. Madison and C. D. Lin "Calculations of elastic scattering cross sections at large angles between electrons and multiply charged ions in the distorted wave approximation", J. Phys. B24, 3203 (1991).
116. W. Fritsch and C. D. Lin " Theory of ion-atom collisions- Coupled Channel Methods," Phys. Rept. 202, 1 (1991).
115. N. Toshima and C. D. Lin "Coherence Parameters of Atomic Excited States: Comparison of Results from the CTMC and the Quantal Calculations," Z. Phys. D21, 227 (1991).
114. Z. Chen and C. D. Lin "State-Selective Double Capture in Collisions of Bare Ions with Helium Atoms at Low Energies: II. Ejected Electron Spectra," J. Phys. B24, 4231 (1991).
113. Z. Chen, R. Shingal and C. D. Lin "State-Selective Double Capture in Collisions of Bare Ions with Helium Atoms at Low Energies: I. Total Cross Sections," J. Phys. B24, 2215 (1991).
112. Bing Cong Gou, Z. Chen and C. D. Lin " Radiative and Auger rates of high-lying doubly excited states of multiply charged helium-like ions," Phys. Rev. A43, 3260 (1991).
111. R. Shingal and C. D. Lin " H(n=2,3) density matrices produced in proton-helium collisions at intermediate energies", J. Phys. B24, 963 (1991).
110. R. Shingal and C. D. Lin "Calculations of two-electron transition cross sections between fully stripped ions and helium atoms," J. Phys. B24, 251 (1991).
109. R. Shingal, Z. Chen, K. R. Karim, C. D. Lin and C. P. Bhalla " Charge state dependence of elastic scattering cross sections at large angles between electrons and multiply charged ions," J. Phys. B23, L637 (1990).
108. M. Dunn, Z. Chen and C. D. Lin "Systematic studies of the molecular properties of intrashell and intershell doubly excited states of C<sup>4+</sup> and He", J. Phys. B23, 2435 (1990).
107. Z. Chen and C. D. Lin , "Reply to 'Comment on Calculations of energies of intrashell doubly excited states of beryllium-like ions'", J. Phys. B23, L87 (1990).
106. Z. Chen and C. D. Lin, "Classification of Coulombic three-body systems in hyperspherical coordinates", Phys. Rev. A42, 18 (1990).
105. W. Fritsch and C. D. Lin, "Mechanisms of double excitation in ion-atom collisions at high velocities", Phys. Rev. A41, 4776 (1990).
104. T. Mukoyama and C. D. Lin " Calculations of K-shell ionization cross sections by charged particles in the distortion approximation using pseudostates", Phys. Rev. A40, 6886 (1989).

103. T. Mukoyama and C. D. Lin "Target atomic number dependence of projectile excitation cross sections of He-like iron ions", *Phys. Lett.* A141, 138 (1989).
102. M. Kimura, N. F. Lane and C. D. Lin " Current status of theoretical studies of ion-atom collisions at low to intermediate collision energies", *Chinese J. Phys.* 27, 22 (1989).
101. T. Mukoyama and C. D. Lin "Calculations of cross sections for excitation and ionization of inner shells of atoms by heavy ions in the distortion approximation", *Chinese J. Phys.* 27, 117 (1989).
100. R. Shingal and C. D. Lin "Ionization and electron transfer in  $\text{He}^{2+} + \text{H}$  collisions," *J. Phys.* B22, L445 (1989).
99. R. Shingal and C. D. Lin, "Theoretical studies of electron capture in  $\text{H}^+$  on  $\text{H}_2$  Collisions", *J. Phys.* B22, L659 (1989).
98. Z. Chen and C. D. Lin, "Systematics of autoionization widths of doubly excited states of atoms," *Phys. Rev.* A40, 6712 (1989).
97. R. Shingal and C. D. Lin " An orientation-dependent atomic model for electron transfer in ion-molecule collisions: Applications to  $\text{H}^+ + \text{H}_2$  and  $\text{He}^{2+} + \text{H}_2$ ", *Phys. Rev.* A40, 1302 (1989).
96. Z. Chen and C.D. Lin "Calculations of Energies of Doubly Excited States of Berylliumlike Ions," *J. Phys.* B22, 2875 (1989).
95. C. D. Lin, R. Shingal, A. Jain and W. Fritsch " Orientation and Alignment of Collisionally Excited States," *Phys. Rev.* A39, 4455 (1989).
94. C. D. Lin "Systematics of Energies of Double Excited States of Heliumlike Ions," *Phys. Rev.* A39, 4355 (1989).
93. C. D. Lin, R. Shingal, A. Jain and W. Fritsch "Two-electron processes in  $\text{He}^{2+} + \text{He}$  collisions at intermediate impact energies", *J. Phys. Coll. (France)*, C1-93 (1989).
92. A. Jain, C.D. Lin and W. Fritsch "State-Selective Double-Electron Capture in  $\text{He}^{2+} + \text{He}$  Collisions at Intermediate Energies," *Phys. Rev.* A39, 1741 (1989).
91. C. D. Lin "Theoretical Studies of Heavy Particle Collisions," in "Fundamental Processes of Atomic Dynamics," Plenum, 1988, edited by Briggs et al.
90. C. D. Lin "Classification of Doubly Excited States of Two-Electron Atoms," in "Fundamental Processes of Atomic Dynamics," Plenum, 1988 edited by Briggs et al.
89. W. Fritsch and C.D. Lin "A Comment on the Atomic-Basis Calculations for the Collision System  $\text{Li}^{3+} + \text{H}$ ," *Phys. Lett.* 127, 425 (1988).
88. W. Fritsch and C.D. Lin "Analysis of Electron Correlation in Simultaneous Electron Transfer and Excitation in Atomic Collisions," *Phys. Rev. Lett.* 61, 690 (1988).
87. A. Jain, N.C. Deb, N.C. Sil and C.D. Lin "Orientation and Alignment Parameters in  $e^-$  and  $e^+$  Impact Excitation of Hydrogenlike Positive Ions," *J. Phys.* B21, 3793 (1988).

86. A. Jain, C.D. Lin and W. Fritsch "Density Matrices of the  $n=2$  and  $3$  Manifolds of H Atoms Produced in p-H Collisions at 1-50 keV Impact Energies," J. Phys. B21, 1545 (1988).
85. C. D. Lin and X.H. Liu "Methods of Solving Coulombic Three-Body Problems in Hyperspherical Coordinates," Phys. Rev. A37, 2749-63 (1988).
84. J. Tan and C.D. Lin "Theoretical Study of Differential Charge-Transfer Cross Sections for  $\text{Ne}^{4+} + \text{He}$  Collisions at Low Energies," Phys. Rev. A37, 1152-60 (1988).
83. A. Jain, C. D. Lin and W. Fritsch "Density Matrices of the Excited H( $n=2$  and  $3$ ) Atoms Formed in 25-100 keV Proton-Helium Charge Transfer Collisions," Phys. Rev. A36, 2041 (1987).
82. S. Watanabe and C. D. Lin "A Classification Scheme of Triply Excited States from a Molecular Viewpoint," Phys. Rev. A36, 511 (1987).
81. C. D. Lin and J. H. Macek, "Theory of anisotropy transfer and calculations of alignment of np states populated in electron capture by highly charged ions", Phys. Rev. A35, 5005 (1987).
80. T. Mukoyama and C. D. Lin "Finite-Basis-Set Approach to the Dirac Equation for Atoms in a Dirac-Fock-Slater Potential," Phys. Rev. A35, 4942 (1987).
79. C. D. Lin and S. Watanabe, "Double Rydberg formula and applications to doubly excited states of highly charged ions", Phys. Rev. A35, 4499 (1987)
78. M. Kimura and C. D. Lin "A Unified Atomic-Orbital and Molecular- Orbital Matching Method for Ion-Atom and Atom-Atom Collisions," Comments on Atomic and Mol. Phys. 20, 35 (1987).
77. C. D. Lin "Classification of Two-Electron Doubly Excited States," Comments on Atomic and Mol. Phys. 19, 89 (1987).
76. W. Fritsch and C. D. Lin "Two-Electron Description of Electron Transfer in  $\text{He}^+ + \text{He}^+$  Collisions," Phys. Lett. A123, 128 (1987).
75. J. Tan, C. D. Lin and M. Kimura "A Quantal Study of Differential Cross Sections for Double Charge Transfer in  $\text{C}^{6+}$ -He Collisions," J. Phys. B20, L91 (1987).
74. A. Jain, C. D. Lin and W. Fritsch "Density Matrix for The H( $n=3$ ) Atoms Formed in Electron Capture Process of  $\text{H}^+$ -Helium Collisions at 25-100 keV," Phys. Rev. A35, 3180 (1987).
73. C. D. Lin and J. H. Macek "Theory of Anisotropy Transfer and Calculations of Alignment of np States Populated in Electron Capture by Highly Charged Ions," Phys. Rev. A35, 5005 (1987).
72. C. D. Lin and S. Watanabe "Double Rydberg Formula and Applications to Doubly Excited States of Highly Charged Ions," Phys. Rev. A35, 4499 (1987).
71. A. Jain, C.D. Lin and T. Mukoyama "Electron capture in  $\text{C}^{6+} + \text{He}$  and  $\text{O}^{8+} + \text{He}$  collisions at intermediate energies in the atomic-orbital- expansion method," Phys. Rev. A35, 954 (1986).

70. W. Fritsch and C. D. Lin "Atomic-orbital expansion study for the quasi- two-electron collision systems  $O^{8+} + He$  and  $C^{6+} + He$ ," J. Phys. B19, 2683 (1986).
69. A. Jain, C. D. Lin and W. Fritsch, " Electron capture in  $C^{6+}+He$  and  $O^{8+}+He$  collisions at intermediate energies in the atomic orbital expansion method", Phys. Rev. A34, 3676 (1986).
68. S. Watanabe and C. D. Lin "Demonstration of Moleculelike Rovibrational Modes of Doubly Excited States in Hyperspherical Coordinates," Phys Rev. A34, 823 (1986).
67. M. Kimura and C. D. Lin " Charge Transfer and Excitation Processes in p-He Collisions Using a Unified AO-MO Matching Method," Phys. Rev. A34, 176 (1986).
66. C. P. Park, A. F. Starace, J. Tan and C. D. Lin "Electric Dipole Matrix Element Formulas in Hyperspherical Coordinates with Applications to  $H^-$  and He," Phys. Rev. A33, 1000 (1986).
65. C. D. Lin "The study of atomic three-body problems in hyperspherical coordinates," in "Few body methods: Principles and applications," World Scientific, Singapore, (1986), edited by T. K. Lim, C. G. Bao, D. P. Hou and H. S. Huber.
64. C. D. Lin "Doubly excited states, including new classification schemes," Advances in Atomic Mol. Phys., Vol. 22, 77-142 (1986)
63. C. D. Lin "Classification of doubly excited states," invited papers in Electronic and Atomic Collisions, p. 643, ed. Lorents and W. Meyerhoff (1986).
62. T. Mukoyama, C. D. Lin and W. Fritsch "Demonstration of Electron Energy Distribution Ejected in Ion-Atom Collisions by Pseudostates," Phys. Rev. A32, 2490 (1985).
61. C. D. Lin "Classification and Supermultiplet Structure of Doubly Excited States," Nuc. Inst. Methods, A240, 572 (1985).
60. M. Kimura and C. D. Lin "Unified Treatment of Slow Atom-Atom and Ion-Atom Collisions. II. Applications to  $H^++H$  and  $C^{6+}+H$  Collisions," Phys. Rev. A32, 1357 (1985).
59. W. Fritsch and C. D. Lin "A Close-Coupling Study of K-Shell Vacancy Production in Near-Symmetric Collisions", Phys. Rev. A31, 1164 (1985).
58. M. Kimura and C. D. Lin "A Unified Treatment of Slow Ion-Atom and Atom-Atom Collisions," Phys. Rev. A31, 590 (1985).
57. W. Fritsch and C. D. Lin "Description of Electronic Processes in Ion-Atom Collisions with Two-Center Atomic-Orbital Expansions", in Electronic and Atomic Collisions, ed. Eichler, I.V. Hertel, and N. Stolterfoht (1984).
56. W. Fritsch and C. D. Lin "Atomic-Basis Study of Electron Transfer into  $C^{3+}(nl)$  Orbitals in  $C^{4+}+H$  and  $C^{4+}+Li$  Collisions," J. Phys. B17, 3271 (1984).
55. W. R. Johnson and C. D. Lin "Multi-Channel Relativistic Random Phase Approximation for the Photoionization of Atoms," Phys. Rev. A20, 964 (1979).

54. T. G. Winter and C. D. Lin "Triple-Center Treatment of Ionization in p-H Collisions," Phys. Rev. A29, 3071 (1984).
53. W. Fritsch and C. D. Lin, " Atomic-orbital-expansion studies of electron-transfer in bare-nucleus Z( Z=2,4-8)-hydrogen-atom collisions, Phys. Rev. A29, 3039 (1984)
52. C. D. Lin and J. H. Macek "Radial and Angular Correlations of Two Excited Electrons. IV. Comparison of Configuration-Interaction Wave Functions with the Group-Theoretical Basis Functions," Phys. Rev. A29, 2317 (1984).
51. T. G. Winter and C. D. Lin "Triple-Center Treatment of Electron Transfer and Excitation in p-H Collisions," Phys. Rev. A29, 567 (1984).
50. C. D. Lin "Classification and Supermultiplet Structure of Doubly Excited States," Phys. Rev. A29, 1019 (1984).
49. C. D. Lin "Classification of Doubly Excited States of Two-Electron Atoms," Phys. Rev. Lett. 51, 1348 (1983).
48. C. D. Lin "Interpretation of the Stark Effect of H<sup>-</sup> Resonances," Phys. Rev. A28, 1876 (1983). [Rapid Communication].
47. J. Hall, P. Richard, T. J. Gray, J. Newcomb, P. Pepmiller, C. D. Lin, K. Jones, B. Johnson and D. Gregory "Systematics of Single and Double K-Shell-Vacancy Production in Ti Bombarded by Heavy Ion," Phys. Rev. A28, 99 (1983).
46. W. Fritsch and C. D. Lin "Coupled-State Calculations for Excitation, Charge Transfer, and Ionization in 1-75 keV Proton-Hydrogen-Atom Collisions," Phys. Rev. A27, 3361 (1983). [Rapid Communication].
45. W. Fritsch and C. D. Lin "Atomic-Orbital Expansion Study of Electron Capture in H<sup>+</sup>+Li and He<sup>2+</sup>+Li Collisions," J. Phys. B16, 1595 (1983).
44. W. Fritsch and C. D. Lin "Atomic-Orbital Expansions for Describing Charge Transfer in Slow Ion-Atom Collisions," Physica Scripta, Vol. T3, 241 (1983).
43. C. D. Lin "Properties of Doubly Excited States of Li<sup>-</sup> and Be: The Study of Electron Correlations in Hyperspherical Coordinates," J. Phys. B16, 723 (1983).
42. C. D. Lin "Radial and Angular Correlations of Two Excited Electrons: III. Comparison of Configuration-Interaction Wave Functions with Adiabatic Channel Functions in Hyperspherical Coordinates," Phys. Rev. A27, 22 (1983).
41. C. D. Lin "Radial and Angular Correlations of Two Excited Electrons: II. High-Lying Doubly-Excited States," Phys. Rev. A26, 2305 (1982).
40. W. Fritsch and C. D. Lin "Excitation and Charge Transfer to 2s and 2p States in H<sup>+</sup> + H Collisions at Intermediate Energies," Phys. Rev. A26, 762 (1982).
39. W. Fritsch and C. D. Lin "Charge Transfer in Li<sup>3+</sup> + H Collisions," J. Phys. B15, L281 (1982).

38. W. Fritsch and C. D. Lin "Close-Coupling Calculations for Inelastic Processes in Intermediate Energy Ion-Atom Collisions," J. Phys. B15, 1255 (1982).
37. C. D. Lin, T. G. Winter and W. Fritsch "Three-Center Atomic Expansion Method in Ion-Atom Collisions," Phys. Rev. A25, 2395 (1982).
36. C. D. Lin, "Properties of High-Lying Doubly-Excited States of H," Phys. Rev. A25, 1535 (1982).
35. C. D. Lin "Some New Approaches to Atomic Expansion Methods in Ion-Atom Collisions," Comments in Atomic and Molecular Physics, Vol 11, 261 (1982).
34. C. D. Lin "Radial and Angular Correlations of Doubly-Excited Electrons," Phys. Rev. A25, 76 (1982).
33. C. D. Lin and P. Richard "Inner-Shell Vacancy Production in Ion-Atom Collisions," Adv. in Atomic Mol. Physics, Vol. 17, p. 275-348, (1981).
32. J. Hall, P. Richard, T. J. Gray, C. D. Lin, K. Jones, B Johnson and D. Gregory "Double K-shell to K-shell Electron Transfer in Ion-Atom Collisions," Phys. Rev. A24, 2416 (1981).
31. W. Fritsch, C. D. Lin and L. N. Tunnell, "On Charge Transfer in Ion-Atom Collisions at Intermediate Velocities," IEEE Trans. Nucl. Science NS-28, 1146 (1981).
30. P. J. Martin, K. Arnett, D. M. Blankenship, T. J. Kvale, J. L. Peacher, E. Redd, V. C. Sutcliffe, J. T. Park, C. D. Lin and J. H. McGuire, "Differential Cross Sections for Electron Capture from Helium by 25- to 100 KeV Incident Protons," Phys. Rev. A23, 2858 (1981).
29. W. Fritsch, C. D. Lin and L. N. Tunnell "On the Dynamical Description of K-K Charge Transfer in Highly Ionized Ion-Atom Collisions," J. Phys. B14, 2861 (1981).
28. C. D. Lin "Analytical Channel Functions for Two-Electron Atoms in Hyperspherical Coordinates," Phys. Rev. A23, 1585 (1981).
27. C. D. Lin and L. N. Tunnell "Improved Atomic Model for Charge Transfer in Multielectron Ion-Atom Collisions at Intermediate Energies," Phys. Rev. A22, 76 (1980).
26. W. R. Johnson, C. D. Lin, K. T. Cheng and C. M. Lee " Relativistic Random Phase Approximation," Physica Scripta, Vol 21, 409 (1980).
25. C. D. Lin "Atomic Expansion Method for Electron Capture in Ion-Atom Collisions," IEEE Transactions on Nuclear Science," Vol. NS-26, No. 1, 1807 (1979).
24. C. D. Lin and L. N. Tunnell "Subshell Electron Capture Cross Sections of Argon Atoms by Protons," J. Phys. B12, L485 (1979).
23. W. R. Johnson and C. D. Lin "Multi-Channel Relativistic Random Phase Approximation for the Photoionization of Atoms," Phys. Rev. A20, 964 (1979).
22. C. D. Lin and W. R. Johnson "Two-Channel Relativistic Random-Phase Approximation Applied to the Photoionization of Helium- and Beryllium-Like Ions," J. Phys. B12, 1677 (1979).

21. C. D. Lin "Double K-Shell Electron Capture Cross Section for Fast Ion-Atom Collisions," Phys. Rev. A19, 1510 (1979).
20. C. D. Lin "Quasi-Molecular Binding Corrections to the Two-State Atomic Expansion Method for Electron Capture at Low Energies," J. Phys. B11, L595 (1978).
19. C. D. Lin and S. C. Soong "Differential Cross Sections for Electron Capture in Fast Proton-Multielectron Atom Collisions," Phys. Rev. A18, 499 (1978).
18. C. D. Lin, S. C. Soong and L. N. Tunnell "Two-State Atomic Expansion Methods for Electron Capture from Multielectron Atoms by Fast Protons," Phys. Rev. A17, 1646 (1978).
17. C. D. Lin "Electron Capture for Ion-Atom Collisions at Intermediate Energies," J. Phys. B11, L185 (1978).
16. C. D. Lin, G. A. Victor and C. Laughlin "Magnetic Quadrupole Transitions of the Beryllium and Magnesium Isoelectronic Sequences," Astrop. J. 220, 734 (1978).
15. C. D. Lin, W. R. Johnson and A. Dalgarno "f-values for Transitions Between the Low-Lying S and P States of Helium-like Ions with  $Z > 10$ ," Ap. J. 217, 1011 (1977).
14. P. Shorer and C. D. Lin "Magnetic Quadrupole Transition Probabilities for the Beryllium Isoelectronic Sequence," Phys. Rev. A16, 2068 (1977).
13. P. Shorer, C. D. Lin and W. R. Johnson "Oscillator Strengths for the Magnesium Isoelectronic Sequence," Phys. Rev. A16, 1109 (1977).
12. W. R. Johnson and C. D. Lin "Application of the Relativistic Random Phase Approximation to the Photoionization of Atoms," J. Phys. B10, L331 (1977).
11. C. D. Lin, and W. R. Johnson "Oscillator Strengths for the Beryllium Isoelectronic Sequence," Phys. Rev. A15, 1046 (1977).
10. C. D. Lin, and W. R. Johnson and A. Dalgarno "Radiative Decays of the  $n=2$  States of He-like Ions," Phys. Rev. A15, 154 (1977).
9. W. R. Johnson, C. D. Lin, and A. Dalgarno "Allowed and Forbidden Transitions of Helium-like Ions," J. Phys. B9, L303 (1976).
8. W. R. Johnson and C. D. Lin "Relativistic Random Phase Approximation Applied to Atoms of the He Isoelectronic Sequence," Phys. Rev. A14, 565 (1976).
7. C. D. Lin "Properties of Resonance States in  $H^-$ ," Phys. Rev. A14, 30 (1976).
6. C. D. Lin "Feshbach and Shape Resonances in the e-H ( $^1P^0$ ) System," Phys. Rev. Lett. 35, 1150 (1975).
5. C. D. Lin "Ground State and Elastic Phase Shift of the Electron- Hydrogen System Studies in Hyperspherical Coordinates," Phys. Rev. A12, 493 (1975).

4. C. D. Lin "Correlations of Excited Electrons. The Study of Channels in Hyperspherical Coordinates," Phys. Rev. A10, 1986 (1974).
3. C. D. Lin "Theoretical Analysis of the Al I Absorption Spectrum," Astrop. J. 187, 385 (1974).
2. C. D. Lin "Simplified Version of the Random-Phase-Approximation-with- Exchange Method," Phys. Rev. A9, 181 (1974).
1. C. D. Lin "Channel Interaction and Threshold Behavior of Photoionization, " Phys. Rev. A9, 171 (1974).