

## List of publications (Doo-Sik Ahn)

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39. "Charge-induced unzipping of isolated proteins to a defined secondary structure"  
Ana Isabel González Flórez, Eike Mucha, **Doo-Sik Ahn**, Sandy Gewinner, Wieland Schöllkopf, Kevin Pagel, Gert von Helden  
*Angew. Chem. Int. Ed.*, 55, 3295-3299 (2016).
38. "Structure and dynamic role of conical intersections in the  $\pi\sigma^*$ -mediated photodissociation reactions" (Review article)  
Hyun Sik You, Songhee Han, Jun-Ho Yoon, Jeong Sik Lim, Jeongmook Lee, So-Yeon Kim, **Doo-Sik Ahn**, Jean Sun Lim, Sang Kyu Kim  
*Int. Rev. Phys. Chem.*, 34, 429-459 (2015).
37. "IR spectroscopy of protonated leu-enkephalin and its 18-crown-6 complex embedded in helium droplets"  
Ana Isabel González Flórez, **Doo-Sik Ahn**, Sandy Gewinner, Wieland Schöllkopf, Gert von Helden  
*Phys. Chem. Chem. Phys.*, 17, 21902-21911 (2015)
36. "Gas phase hydration of amino acids and dipeptides: effects on the relative stability of zwitterion vs. canonical conformers" (Review article)  
Ju-Young Kim, **Doo-Sik Ahn**, Sung-Woo Park, Sungyul Lee  
*RSC Adv.* 4, 16352-16361 (2014).
35. "Valence Electron Ionization Dynamics of Chromium by a Photoelectron Imaging Technique: J<sub>+</sub>-Dependent State and Angular Distribution"  
Jeongmook Lee, **Doo-Sik Ahn**, Sang Kyu Kim  
*J. Phy. Chem. A* 117, 2138-2143 (2013).
34. "Photoexcitation of mass/charge selected hemin<sup>+</sup> caught in helium nanodroplets"  
Frank Filsinger, **Doo-Sik Ahn**, Gerard Meijer, Gert von Helden  
*Phys. Chem. Chem. Phys.* 14, 13370-13377 (2012).
33. "Nuclear motion captured by the slow electron velocity imaging technique in the tunnelling predissociation of the S<sub>1</sub> methylamine"  
**Doo-Sik Ahn**, Jeongmook Lee, Young Choon Park, Yoon Sup Lee, Sang Kyu Kim  
*J. Chem. Phys.* 136, 024306 (2012).
32. "Vacuum ultraviolet mass-analyzed threshold ionization spectroscopy of methylcyclohexane in the supersonic jet"  
Songhee Han, Hyun Sik Yoo, **Doo-Sik Ahn**, Young S. Choi, Sang Kyu Kim  
*Chem. Phys. Lett.* 518, 38-43 (2011).
31. "Mode-Dependent Fano Resonances Observed in the Predissociation of Diazirine in the S<sub>1</sub> State"

**Doo-Sik Ahn**, So-Yeon Kim, Goo-Il Lim, Sungyul Lee, Young S. Choi, Sang Kyu Kim  
*Angew. Chem. Int. Ed.* 49, 1244-1247 (2010) (selected as a VIP).

30. "Structure of Pyridazine in the S<sub>1</sub> state: Experiment and Theory"

**Doo-Sik Ahn**, Kyo-Won Choi, Sun Jong Baek, Young S. Choi, Sungyul Lee, Heechol Choi, Kyoung Koo Baeck, Sang Kyu Kim  
*ChemPhysChem* 9, 1610-1616 (2008).

29. "Clustering dynamics of the metal-benzene sandwich complex: the role of micro-scopic structure of the solute in the bis( $\eta^6$ -benzene)chromium·Ar<sub>n</sub> clusters (n=1-15)"

Kyo-Won Choi, Sunyoung Choi, **Doo-Sik Ahn**, Songhee Han, Tae Yeon Kang, Sun Jong Baek, Sang Kyu Kim  
*J. Phys. Chem. A* 122, 7125-7127 (2008).

28. "Conformationally specific vacuum-ultraviolet mass-analyzed threshold ionization spectroscopy of alkanethiols: structure and ionization of conformational isomers of ethanethiol, isopropanethiol, 1-propanethiol, tert-butanethiol, and 1-butanethiol"

Sunyoung Choi, Kyo-Won Choi, Songhee Han, **Doo-Sik Ahn**, Tae Yeon Kang, Sun Jong Baek, Sang Kyu Kim  
*J. Phys. Chem. A* 122, 7191-7199 (2008).

27. "State-selective predissociation dynamics of methylamines: the vibronic and H/D effects on the conical intersection dynamics"

**Doo-Sik Ahn**, Jeongmook Lee, Jeong-Mo Choi, Kyoung-Seok Lee, Sun Jong Baek, Kunhye Lee, Kyoung-Koo Baeck, Sang Kyu Kim  
*J. Chem. Phys.* 128, 224305 (2008).

26. "Ionization spectroscopy of conformational isomers of propanal: the origin of the conformational preference"

Sunyoung Choi, Tae Yeon Kang, Kyo-Won Choi, Songhee Han, **Doo-Sik Ahn**, Sun Jong Baek, Sang Kyu Kim  
*J. Phys. Chem. A* 112, 5060-5063 (2008).

25. "Facile S<sub>N</sub>2 Reaction in Protic Solvent: Quantum Chemical Analysis"

Young-Ho Oh, **Doo-Sik Ahn**, Sang-Yoon Chung, Jeong-Hwan Jeon, Sung-Woo Park, Seung Jun Oh, Dong Wook Kim, Hee Seup Kil, Dae Yoon Chi, Sungyul Lee  
*J. Phys. Chem. A* 111, 10152-10161 (2007).

24. "Tautomerization of adenine facilitated by water: Computational study of microsolvation"

Ho-Sung Kim, **Doo-Sik Ahn**, Sang-Yoon Chung, Sang Kyu Kim, Sungyul Lee  
*J. Phys. Chem. A* 111, 8007-8012 (2007).

23. "Density Functional Theory Study of Acetonitrile -Water Clusters: Structures and Infrared Frequency Shifts"

**Doo-Sik Ahn**, Sungyul Lee

*Bull. Kor. Chem. Soc.* 28, 725-729 (2007).

22. "A conformationally specific alpha- and beta-alanine decarboxylation pathway"

Kyo-Won Choi, **Doo-Sik Ahn**, Joo-Hee Lee, Sang Kyu Kim

*Chem. Commun.* 9, 1041-1043 (2007).

21. "A new class of S<sub>N</sub>2 reactions catalyzed by protic solvents: Facile fluorination for isotopic labeling of diagnostic molecules"

Dong Wook Kim, **Doo-Sik Ahn**, Young-Ho Oh, Sungyul Lee, Hee Seup Kil, Seung Jun Oh, Sang Ju Lee, Jae Seung Kim, Jin Sook Ryu, Dae Hyuk Moon, Dae Yoon Chi

*J. Am. Chem. Soc.* 128, 16394-16397 (2006).

20. "Hydrogen-Bond-Directed Highly Stereoselective Synthesis of Z-Enamides via Pd-Catalyzed Oxidative Amidation of Conjugated Olefins"

Ji Min Lee, **Doo-Sik Ahn**, Doo Young Jung, Junseung Lee, Youngkyu Do, Sang Kyu Kim, Sukbok Chang

*J. Am. Chem. Soc.* 128, 12954-12962 (2006).

19. "Intramolecular orbital alignment observed in the photodissociation of thiophenol-d<sub>1</sub>"

Jeong Sik Lim, Ivan S. Lim, Kyoung-Seok Lee, **Doo-Sik Ahn**, Yoon Sup Lee, Sang Kyu Kim

*Angew. Chem. Int. Ed.*, 45, 6290-6293 (2006).

18. "Vibrational Spectroscopy of the Pyridazine Cation in the Ground State"

Kyo-Won Choi, **Doo-Sik Ahn**, Joo-Hee Lee, Sang Kyu Kim

*J. Phys. Chem. A* 110, 2634-2638 (2006).

17. "Nonadiabatic Dynamics in the Photodissociation of ICH<sub>2</sub>CN at 266 and 304 nm Using a Velocity Map Ion Imaging Technique"

Kyoung-Seok Lee, Jung-Sik Lim, **Doo-Sik Ahn**, Kyo-Won Choi, Sang Kyu Kim, Young S. Choi

*J. Chem. Phys.* 124, 124307 (2006).

16. "Intermediate Complexes in S<sub>N</sub>2 Reaction: [Na<sup>+</sup>, F<sup>-</sup>, H<sub>2</sub>O, CH<sub>3</sub>Cl] System"

Jeong-Hwan Jeon, Young-Ho Oh, Sang-Yoon Chung, **Doo-Sik Ahn**, Sung-Woo Park, Sungyul Lee

*Bull. Kor. Chem. Soc.* 26, 2081-2083 (2005).

15. "Computational study of the structures of proline – water clusters"

Kyung-Min Lee, Sung-Woo Park, In-Sun Jeon, Bo-Ra Lee, **Doo-Sik Ahn**, Sungyul Lee

*Bull. Kor. Chem. Soc.* 26, 909-912 (2005).

14. "On the stability of glycine-water clusters with excess electron: Implications for photoelectron spectroscopy"

**Doo-Sik Ahn**, Ae-Ri Kang, Sungyul Lee, Bongsoo Kim, Daniel Neuhauser, Sang Kyu Kim

*J. Chem. Phys.* 122, 84310 (2005).

13. "Structures and isomerization of serine in aqueous solution: Computational study"  
In-Sun Jeon, **Doo-Sik Ahn**, Sung-Woo Park, Sungyul Lee, Sang Kyu Kim  
*Chem. Phys. Lett.* 403, 72-76 (2005).
12. "Structures and isomerization of neutral and zwitterion serine-water clusters: Computational study"  
In-Sun Jeon, **Doo-Sik Ahn**, Sung-Woo Park, Sungyul Lee, Bongsoo Kim  
*Int. J. Quantum Chem.* 101, 55-56 (2005).
11. "One-Photon Mass-Analyzed Threshold Ionization Spectroscopy of Bis( $\eta^6$ -benzene)chromium and Its benzene and Ar Clusters"  
Kyo-Won Choi, **Doo-Sik Ahn**, Sungyul Lee, Sang Kyu Kim  
*J. Phys. Chem. A* 108, 11292-11295 (2004).
10. "Computational study of hydrogen bonding in phenol-acetonitrile-water clusters"  
**Doo-Sik Ahn**, Sungyul Lee, Won-Jo Cheong  
*Bull. Korean Chem. Soc.* 25, 1161-1164 (2004).
9. "Solvent-mediated tautomerization of purine: Single to quadruple proton transfer"  
**Doo-Sik Ahn**, Sungyul Lee, Bongsoo Kim  
*Chem. Phys. Lett.* 390, 384-388 (2004).
8. "Structural Distortion of Pyridazine in the  $^1(n,\pi^*)$  Excited State: Evidence for Local Excitation"  
Kyo-Won Choi, **Doo-Sik Ahn**, Sungyul Lee, Heecheol Choi, Kyung-Koo Baek, Sung-Ung Heo, Sun Jong Baek, Young Sik Choi, Sang Kyu Kim  
*ChemPhysChem* 5, 737-739 (2004).
7. "Effects of microsolvation on the structure and reaction of neutral and zwitterion alanine: Computational study"  
**Doo-Sik Ahn**, Sung-Woo Park, In-Sun Jeon, Min-Kyung Lee, Nam-Hee Kim, Young-Hwa Han, Sungyul Lee  
*J. Phys. Chem. B* 107, 14109-14118 (2003).
6. "Computational study of the s- and p-type hydrogen bonding in acetonitrile - water clusters"  
**Doo-Sik Ahn**, Sungyul Lee  
*Bull. Korean Chem. Soc.* 24, 545-546 (2003).
5. "Hydrogen bonding in aromatic alcohol – water clusters: A brief review" (Review)  
**Doo-Sik Ahn**, In-Sun Jeon, Sang-Hee Jang, Sung-Woo Park, Sungyul Lee, Won-Jo Cheong  
*Bull. Korean Chem. Soc.* 24, 695-702 (2003).
4. "Dynamic paths between alanine-water and alanine zwitterion-water clusters: Single, double and triple proton transfer"  
Sung-Woo Park, **Doo-Sik Ahn**, Sungyul Lee  
*Chem. Phys. Lett.* 371, 74-79 (2003).

3. "Effects of substituting group on the hydrogen bonding in phenol-H<sub>2</sub>O clusters: Ab initio study"

**Doo-Sik Ahn**, Sung-Woo Park, Sungyul Lee

*J. Phys. Chem. A* 107, 131-139 (2003).

2. "Fluorescence excitation spectroscopy of octatetraene-Xe van der Waals clusters"

Tae-Sung Kim, Kyo-Won Choi, Sang Kyu Kim, Young S. Choi, Sung-Woo Park, **Doo-Sik Ahn**,  
Sungyul Lee, K. Yoshihaha

*Bull. Korean Chem. Soc.* 23, 195-200 (2002).

1. "Substituent effects on the binding energies of benzyl alcohol-H<sub>2</sub>O clusters: Ab initio study"

**Doo-Sik Ahn**, Sungyul Lee

*Bull. Korean Chem. Soc.* 23, 262-266 (2002).