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収 録 論 文	
(1) W. Ekardt: Work Function of Small Metal Particles: Self-consistent Spherical Jellium-background Model Phys. Rev. B29 (1984) 1558-1564	11
(2) Julius Jellinek, Thomas L. Beck and R. Stephen Berry: Solid-liquid Phase Changes in Simulated Isoenergetic Ar ₁₃ J. Chem. Phys. 84 (1986) 2783-2794	18
(3) Udo Buck and Reinhard Krohne: Surface Vibrations from Small Clusters to the Solid: He Atom Scattering from Ar _n Phys. Rev. Lett. 73 (1994) 947-950	30
(4) W. D. Knight, Keith Clemenger, Walt A. de Heer, Winston A. Saunders, M. Y. Chou and Marvin L. Cohen: Electronic Shell Structure and Abundances of Sodium Clusters Phys. Rev. Lett. 52 (1984) 2141-2143	34
(5) Yasushi Ishii, Shuhei Ohnishi and Satoru Sugano: Effects of Electron Correlation and Geometrical Structure on Stability of Metal Clusters Phys. Rev. B33 (1986) 5271-5279	37
(6) Christoph Ellert, Martin Schmidt, Christina Schmitt, Thomas Reiners and Hellmut Haberland: Temperature Dependence of the Optical Response of Small, Open Shell Sodium Clusters Phys. Rev. Lett. 75 (1995) 1731-1734	46
(7) K. Rademann, B. Kaiser, U. Even and F. Hensel: Size Dependence of the Gradual Transition to Metallic Properties in Isolated Mercury Clusters Phys. Rev. Lett. 59 (1987) 2319-2321	50
(8) Nobuhisa Fujima and Tsuyoshi Yamaguchi: Shell Structure of Electronic States of Icosahedral Al and Cu Clusters J. Phys. Soc. Jpn. 58 (1989) 1334-1346	53

- (9) O. Cheshnovsky, K. J. Taylor, J. Conceicao and R. E. Smalley:
Ultraviolet Photoelectron Spectra of Mass-Selected Copper Clusters: Evolution of the $3d$ Band
Phys. Rev. Lett. **64** (1990) 1785–1788 66
- (10) Hiroyuki Yoshida, Akira Terasaki, Katsuyoshi Kobayashi, Masaru Tsukada
and Tamotsu Kondow:
Spin-polarized Electronic Structure of Cobalt Cluster Anions Studied by Photoelectron
Spectroscopy
J. Chem. Phys. **102** (1995) 5960–5965 70
- (11) Shinichirou Minemoto, Akira Terasaki and Tamotsu Kondow:
Electronic Structures of Cobalt Cluster Cations: Photodissociation Spectroscopy of Co_n^+ Ar
($n=3-5$) in the Visible to Near-Infrared Range
J. Chem. Phys. **104** (1996) 5770–5775 76
- (12) Isabelle M. L. Billas, A. Châtelain and Walt A. de Heer:
Magnetism from the Atom to the Bulk in Iron, Cobalt, and Nickel Clusters
Science **263** (1994) 1682–1684 82
- (13) J. P. Bucher, D. C. Douglass and L. A. Bloomfield:
Magnetic Properties of Free Cobalt Clusters
Phys. Rev. Lett. **66** (1991) 3052–3055 85
- (14) S. N. Khanna and S. Linderoth:
Magnetic Behavior of Clusters of Ferromagnetic Transition Metals
Phys. Rev. Lett. **67** (1991) 742–745 89
- (15) N. Fujima and T. Yamaguchi:
Magnetic Moment in Ni Clusters Estimated by an Electronic-Shell Model
Phys. Rev. **B54** (1996) 26–28 93
- (16) Shinji Nonose, Hideki Tanaka, Tomoyuki Mizuno, Nam Jun Kim, Kiyohiko Someda
and Tamotsu Kondow:
Dissociation Dynamics of Na_n^+ in Collision with Rare-gas Atoms
J. Chem. Phys. **105** (1996) 9167–9174 96
- (17) C. Bréchnignac, Ph. Cahuzac, F. Carlier, M. de Frutos, R. N. Barnett and Uzi Landman:
Dynamics and Energy Release in Fission of Small Doubly Charged Clusters
Phys. Rev. Lett. **72** (1994) 1636–1639104
- (18) Susumu Saito, Shuhei Ohnishi, Chikatoshi Satoko and Satoru Sugano:
LCAO- $X\alpha$ -Force Study on Stable Structures of Si_6 and Si_{10} Clusters
J. Phys. Soc. Jpn. **55** (1986) 1791–1794108

- (19) Caroline C. Arnold and Daniel M. Neumark:
Study of Si_4 and Si_4^- using Threshold Photodetachment (ZEKE) Spectroscopy
J. Chem. Phys. **99** (1993) 3353–3362112
- (20) T. F. Giesen, A. Van Orden, H. J. Hwang, R. S. Fellers, R. A. Provençal and R. J. Saykally:
Infrared Laser Spectroscopy of the Linear C_{13} Carbon Cluster
Science **265** (1994) 756–759122
- (21) Atsushi Nakajima, Kuniyoshi Hoshino, Takashi Naganuma, Yasutomo Sone and Koji Kaya:
Ionization Potentials of Aluminum-Sodium Bimetallic Clusters (Al_nNa_m)
J. Chem. Phys. **95** (1991) 7061–7066126
- (22) H. Weidele, D. Kreisle, E. Recknagel, G. Schulze Icking-Konert, H. Handschuh, G. Ganteför
and W. Eberhardt:
Thermionic Emission from Small Clusters: Direct Observation of the Kinetic Energy Distribution
of the Electrons
Chem. Phys. Lett. **237** (1995) 425–431132
- (23) L. Bewig, U. Buck, Ch. Mehlmann and M. Winter:
Ionization Induced Fragmentation of Size Selected Neutral Sodium Clusters
J. Chem. Phys. **100** (1994) 2765–2776139
- (24) Wieland Schöllkopf and J. Peter Toennies:
Nondestructive Mass Selection of Small van der Waals Clusters
Science **266** (1994) 1345–1348151
- (25) S. Wolf, G. Sommerer, S. Rutz, E. Schreiber, T. Leisner, L. Wöste and R. Stephen Berry:
Spectroscopy of Size-Selected Neutral Clusters: Femtosecond Evolution of Neutral
Silver Trimers
Phys. Rev. Lett. **74** (1995) 4177–4180155
- (26) J. Wörmer, M. Joppien, G. Zimmerer and T. Möller:
Formation and Confinement of Wannier Excitons in Free Argon Clusters
Phys. Rev. Lett. **67** (1991) 2053–2056159
- (27) C. Bréchnignac, M. Broyer, Ph. Cahuzac, M. de Frutos, P. Labastie and J.-Ph. Roux:
Shape Resonance in $4d$ Inner-Shell Photoionization Spectra of Antimony Clusters
Phys. Rev. Lett. **67** (1991) 1222–1225163