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Metals and Ceramics Division

ATOM PROBE FIELD ION MICROSCOPY AND RELATED TOPICS:
A BIBLIOGRAPHY 1993

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Date Published: October 1994

Prepared for the
DOE Office of Basic Energy Sciences
KC 02 01 01 0

Prepared by the
OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37831-6285
managed by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the
U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-84OR21400

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PREFACE

This bibliography, covering the period 1993, includes references related to the following topics: atom probe field ion microscopy (APFIM), field emission (FE), and field ion microscopy (FIM). Technique-orientated studies and applications are included.

Previous publications containing the papers published prior to this period are as follows:

<i>Atom Probe Field Ion Microscopy and Related Topics: A Bibliography 1978-1987</i>	M.K. Miller and A.R. McDonald	ORNL/TM-11157
<i>Atom Probe Field-Ion Microscopy and Related Topics: A Bibliography 1988</i>	M.K. Miller and A.R. Hawkins	ORNL/TM-11370
<i>Atom Probe Field Ion Microscopy and Related Topics: A Bibliography 1990</i>	M.K. Miller, A.R. Hawkins, and K.F. Russell	ORNL/TM-11696
<i>Atom Probe Field Ion Microscopy and Related Topics: A Bibliography 1991</i>	K.F. Russell and M.K. Miller	ORNL/TM-12005
<i>Atom Probe Field Ion Microscopy and Related Topics: A Bibliography 1992</i>	K.F. Russell and M.K. Miller	ORNL/TM-12223
<i>Atom Probe Field Ion Microscopy and Related Topics: A Bibliography 1992</i>	K.F. Russell, R. D. Godfrey, and M.K. Miller	ORNL/TM-12625
published by Oak Ridge National Laboratory, Oak Ridge, TN 37831-6285 and		
<i>Field-Ion Microscopy and Related Techniques, A Bibliography: 1951-1978</i>	R.E. Thurstans and J.M. Walls	
published by Warwick, Birmingham		

The references contained in this document were compiled from a variety of sources including computer searches and personal lists of publications. To reduce the length of this document, the references have been reduced to the minimum necessary to locate the articles. The references are listed alphabetically by authors. An *Addendum* of references missed in previous bibliographies is included.

We would like to thank Dr. G. D. W. Smith of Oxford University and M. B. Alexander of the ORNL Central Library for their stoic efforts in the preparation of this document.

Sponsored by the Division of Materials Sciences, U.S. Department of Energy, under contract DE-AC05-84OR21400 with Martin Marietta Energy Systems, Inc.

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1993

- 1 Study of stochastic relaxation process of concentration fluctuation in alloys by an atom-probe field-ion microscope Abe, T. Diffus. Defect Data (1993) 95-98, 747-52
- 2 Electronic states of carbon nanotubes Ajiki, H.
Ando, T. J. Phys. Soc. Jpn. (1993) 62, 1255-66
- 3 Early stages of precipitation in dilute Al-Ag alloys Al-Kassab, T.
Haasen, P. Z. Metallkd. (1993) 84, 248-50
- 4 Role of space charge in field emission cathodes Anderson, W.A. J. Vac. Sci. Technol. B (1993) 11, 383-86
- 5 Determination of the electronic structure of solids from the field-emitted electron energy spectrum Anisimov, N.A.
Dukhovnyi, O.V.
Moos, E.N.
Tumareva, T.A. Fiz. Tverd. Tela (1993) 35, 552-56
- 6 Atom-probe and field emission electron spectroscopy studies of Ge on Ir Ashino, M.
Tomitori, M.
Nishikawa, O. Appl. Surf. Sci. (1993) 67, 43-47
- 7 Triode characteristics and vacuum considerations of evaporated silicon microdevices Asiam, M.
Klimecky, P.
Myers, G.P.
Busta, H.H.
Zimmerman, B.J.
Artz, B.E.
Cathey, L.W.
Elder, R.E. J. Vac. Sci. Technol. B (1993) 11, 422-25
- 8 APFIM studies of some aluminum alloys Babu, S.S.
Hono, K.
Okano, R.
Sakurai, T. Appl. Surf. Sci. (1993) 67, 361-76
- 9 APFIM studies on martensite tempering of Fe-C-Si-Mn low alloy steel Babu, S.S.
Hono, K.
Sakurai, T. Appl. Surf. Sci. (1993) 67, 321-27
- 10 Statistical model of semiconductor field emitter with atomically clean surface Bakhtizin, R.Z.
Ghots, S.S.
Glazer, P.V. J. Micromech. Microeng. (1993) 3, 45-48
- 11 Integrated microtips: Application to flat displays Baptist, R. NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) 235, 165-76

1993 BIBLIOGRAPHY

- 12 Emission characteristics of gated silicon wedges
Barry, J.D.
McGruer, N.E.
Warner, K.
Bintz, W.J.
Nagras, A.
IEEE Electron Device Lett. (1993) 14, 83-84
- 13 Nonlinear regression technique for parameter extraction from field-emission data
Barry, S.W.
Weichold, M.H.
J. Vac. Sci. Technol. B (1993) 11, 379-82
- 14 Adatom exclusion zone has its attractions
Bassett, D.
Phys. World (1993) 6, 21-22
- 15 Microstructural changes occurring during ageing of the thermoelastic martensite of γ -quenched U-6 wt. % Nb alloy below 450°C
Beverini, C.G.
Edmonds, D.V.
Conf. on Martensitic Transformations (ICOMAT-92), Monterey, CA (1993)
- 16 High-strength (5 GPa) steel wire: an atom-probe study
Bhadeshia, H.K.D.H.
Harada, H.
Appl. Surf. Sci. (1993) 67, 328-33
- 17 Surface diffusion of lithium across and along atomic rows on the W(112) plane
Biernat, T.
Kleint, C.
Meclewski, R.
Appl. Surf. Sci. (1993) 67, 206-10
- 18 Reply to "Comment of H.-W. Fink on 'On the electron and metallic ion emission from nanotips fabricated by field-surface-melting technique: experiments on W and Au tips' by V.T. Binh and N. Garcia"
Binh, V.T.
Garcia, N.
Ultramicroscopy (1993) 50, 103-5
- 19 Nanotip fashioning and nanostructure characteristics
Binh, V.T.
Garcia, N.
Purcell, S.T.
Semet, V.
NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) 235, 59-76
- 20 Reply to Comment on "Field-emission spectroscopy of single-atom tips"
Binh, V.T.
Purcell, S.T.
Garcia, N.
Phys. Rev. Lett. (1993) 70, 2504-5
- 21 Field emission current fluctuations of adsorbed layers
Blaszczyszyn, R.
Prog. Surf. Sci. (1993) 42, 117-29
- 22 The interaction of water with surfaces of Pt and Ir field emitters
Blaszczyszyn, R.
Ciszewski, A.
Blaszczyszynova, M.
Bryl, R.
Zuber, S.
Appl. Surf. Sci. (1993) 67, 211-17

- | | | | |
|----|---|---|--|
| 23 | An atom probe for three-dimensional tomography | Blavette, D.
Bostel, A.
Sarrau, J.M.
Deconihout, B.
Menand, A. | Nature (1993) <u>363</u> , 432-35 |
| 24 | The tomographic atom probe: a quantitative three-dimensional nanoanalytical instrument on an atomic scale | Blavette, D.
Deconihout, B.
Bostel, A.
Sarrau, J.M.
Bouet, M.
Menand, A. | Rev. Sci. Instrum. (1993) <u>64</u> , 2911-29 |
| 25 | A new generation of three-dimensional atom probe | Blavette, D.
Deconihout, B.
Bostel, A.
Sarrau, J.
Menand, A. | C.R. Acad. Sci. (Paris) Series II (1993) <u>317</u> , 1279-85 |
| 26 | Microscopy and microanalysis of interfaces on a subnanometric scale with the atom probe | Blavette, D.
Letellier, L.
Deconihout, B. | Ann. Chim. Fr. (1993) <u>18</u> , 303-10 |
| 27 | A 3-dimensional atomic analytic probe | Blavette, D.
Menand, A. | Recherche (1993) <u>24</u> , 464-66 |
| 28 | The atomic probe in physical metallurgy - present limits and future prospects | Blavette, D.
Menand, A. | Rev. Metall. (1993) <u>90</u> , 651-57 |
| 29 | Dynamic studies of surface reactions with microscopic techniques | Block, J.H.
Ehsasi, M.
Gorodetskii, V. | Prog. Surf. Sci. (1993) <u>42</u> , 143-68 |
| 30 | Direct observation of surface mobility with microscopic techniques: photoemission electron- and field electron microscopy | Block, J.H.
Ehsasi, M.
Gorodetskii, V.
Karpowicz, A.
Berdau, M. | Stud. Surf. Sci. Catal. (1993) <u>77</u> , 189-94 |
| 31 | Making a field-emission tip structure | Bol, I.I. | U.S. Patent No. 5269877 (1993) |
| 32 | Emission characteristics and morphology of wet etched cathodes in p-type silicon | Boswell, E.C.
Wilshaw, P.R. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 412-15 |
| 33 | Structure and composition of nitrogen enrichments formed in iron-nitrogen martensites at room temperature | Bottger, A.
Sha, W.
van Genderen, M.J.
Mittemeijer, E.J.
Smith, G.D.W. | High Nitrogen Steels 93, V.G. Gavriljuk and V.M. Nadutov, eds., Institute of Metals Physics, Kiev, Ukraine (1993) 255-60 |
| 34 | Laser-triggered photo and field emission from special metallic cathodes | Boussoukaya, M.
Ohigashi, N. | Technol. Rep. Kansai Univ. (1993) <u>35</u> , 291-304 |

1993 BIBLIOGRAPHY

- | | | | |
|----|---|---|---|
| 35 | The use of moment estimators to determine the parameters of concentration fluctuations in random area atom probe analyses | Bowman, K.O.
Miller, M.K.
Shenton, L.R. | Appl. Surf. Sci. (1993) <u>67</u> , 424-28 |
| 36 | Ion and electron energies in gated field emitter failures | Browning, J.
Meassick, S.
Xia, Z.
Chan, C.
McGruer, N. | IEEE Trans. Plasma Sci. (1993) <u>21</u> , 259-60 |
| 37 | Gravity probe B gyroscope charge control using field-emission cathodes | Buchman, S.
Quinn, T.
Keiser, G.M.
Gill, D. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 407-11 |
| 38 | Applications of atom probe field-ion microscopy to the study of interfaces | Burke, M.G.
Miller, M.K. | Proc. 51st Annual Meeting of the Microscopy Society of America, G.W. Bailey and C.L. Rieder, eds., San Francisco Press, San Francisco, CA (1993) 862-63 |
| 39 | Experimental and theoretical determinations of gate-to-emitter stray capacitances of field emitters | Busta, H.H.
Pogemiller, J.E.
Chan, W.
Warren, G. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 445-48 |
| 40 | Collector-assisted operation of micromachined field-emitter triodes | Busta, H.H.
Pogemiller, J.E.
Zimmerman, B.J. | IEEE Trans. Electron Devices (1993) <u>40</u> , 1537-42 |
| 41 | The field emitter triode as a displacement/pressure sensor | Busta, H.H.
Pogemiller, J.E.
Zimmerman, B.J. | J. Micromech. Microeng. (1993) <u>3</u> , 49-56 |
| 42 | Temperature dependence of I-V characteristics of vacuum triodes from 24 to 300 K | Busta, H.H.
Zimmerman, B.J.
Pogemiller, J.E.
Tringides, M.C.
Spindt, C.A. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 400-02 |
| 43 | Field-emission cathode structures | Cade, N.A. | Eur. Pat. Appl. (Patent) EP 570211 (1993) |
| 44 | Analysis and design of microwave amplifiers employing field-emitter arrays | Calame, J.P.
Gray, H.F.
Shaw, J.L. | J. Appl. Phys. (1993) <u>73</u> , 1485-1504 |
| 45 | Simulation of rapid thermal pulsing for field evaporation | Camus, P.P.
Larson, D.J.
Kelly, T.F. | Appl. Surf. Sci. (1993) <u>67</u> , 467-72 |
| 46 | Monte Carlo simulation of energy deposition and scattering by fast electrons in a field emission tip | Camus, P.P.
Turowski, M.A.
Kelly, T.F. | Appl. Surf. Sci. (1993) <u>67</u> , 481-86 |

- | | | | |
|----|---|--|--|
| 47 | Saddle-field ion source deposition of conductive thin films | Cardinale, G.F.
Howitt, D.G. | J. Vac. Sci. Technol. A (1993) <u>11</u> , 1418-21 |
| 48 | Dynamic Ising model simulations of nucleation and growth in copper-cobalt alloys | Cerezo, A.
Hyde, J.M.
Miller, M.K.
Setna, R.P.
Smith, G.D.W. | Materials Theory and Modelling (Proc. Materials Research Society Fall '92 Meeting), J. Broughton, P. Bristowe and J. Newsam, eds., Materials Research Society, Pittsburgh, PA (1993) <u>291</u> , 623-28 |
| 49 | Method of fabrication of matrix carbon fiber field emission cathode structures for flat-panel indicators | Chakhovskoi, A.G.
Sheshin, E.P.
Kupryashkin, A.S.
Seliverstov, V.A. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 511-13 |
| 50 | Initial results on the Ag/CdO {222} interface: Atomic scale interfacial chemistry and sequencing of ordered cadmium/oxygen planes | Chan, D.K.
Jang, H.
Seidman, D.N.
Merkle, K.L. | Scr. Metall. Mater. (1993) <u>29</u> , 1119-24 |
| 51 | Dynamical behavior and energetics of the Ir(001) surface | Chen, C.-L.
Tsong, T.T. | Phys. Rev. B (1993) <u>47</u> , 15852-59 |
| 52 | Air-bridge-field-emission vacuum device fabrication with 0.1 μm spacing | Chen, C.-Y.
Klemer, D.P.
Shieh, T.-J.
Shieh, J.-L.
Pujara, M. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 497-500 |
| 53 | An investigation of low aberration electrostatic lenses for use with a field ionization ion source and a proton microprobe | Colman, R.A.
Legge, G.J.F. | Optik (1993) <u>95</u> , 99-108 |
| 54 | Lateral field emission devices | Cronin, J.E.
Morrett, K.E.
Potter, M.D.
Sullivan, T.D. | U.S. Patent No. 5233263 (1993) |
| 55 | Optimum geometry and space-charge effects in vacuum microelectronic devices | Cui, Z.
Tong, L. | IEEE Trans. Electron Devices (1993) <u>30</u> , 448-52 |
| 56 | Theory of electron emission in high fields from atomically sharp emitters: Validity of the Fowler-Nordheim Equation | Cutler, P.H.
He, J.
Miller, J.
Miskovsky, N.M.
Weiss, B.
Sullivan, T.E. | Prog. Surf. Sci. (1993) <u>42</u> , 169-85 |

1993 BIBLIOGRAPHY

- | | | | |
|----|---|--|--|
| 57 | Theory of electron emission in high fields from atomically sharp emitters: Validity of the Fowler-Nordheim equation | Cutler, P.H.
He, J.
Miskovsky, N.M.
Sullivan, T.E.
Weiss, B. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 387-91 |
| 58 | Atom probe and transmission electron microscopy study of reverted duplex stainless steels | Danoix, F.
Bas, P.
Massoud, J.P.
Guttman, M.
Auger, P. | Appl. Surf. Sci. (1993) <u>67</u> , 348-55 |
| 59 | Controlled aperture atom probe design and applications | Danoix, F.
Bouet, M.
Pareige, P.
Menand, A. | Appl. Surf. Sci. (1993) <u>67</u> , 451-58 |
| 60 | Local field and image effects in field ionization: relative importance | de Castilho, C.M.C.
Andrade, R.F.S.
Sousa, C.T. | Appl. Surf. Sci. (1993) <u>67</u> , 97-100 |
| 61 | Image potential and local field effects on ionization rates in the field ion microscope | de Castilho, C.M.C.
Andrade, R.F.S.
Sousa, C.T. | J. Phys.: Condens. Matter (1993) <u>5</u> , 1833-40 |
| 62 | On the development of a 3D tomographic atom-probe | Deconihout, B.
Bostel, A.
Menand, A.
Sarrau, J.M.
Bouet, M.
Chambreland, S.
Blavette, D. | Appl. Surf. Sci. (1993) <u>67</u> , 444-50 |
| 63 | Atom-probe investigation of the partitioning of interstitial elements in two-phase $\gamma+\alpha_2$ Ti-Al-based alloys | Denquin, A.
Naka, S.
Huguet, A.
Menand, A. | Scr. Metall. Mater. (1993) <u>28</u> , 1131-36 |
| 64 | Electron focusing: Computer simulation | deRaedt, H.
Michielsen, K. | NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) <u>235</u> , 45-47 |
| 65 | Evidence for reneutralization of field ions generated by electron- stimulated field desorption | Dirks, J.
Drachsel, W.
Block, J.H. | Appl. Surf. Sci. (1993) <u>67</u> , 118-23 |
| 66 | Semiconductor-metal composite field-emission cathodes | Ditchek, B.M.
Neifeld, M.A.
Gustafson, J.C. | PCT Int. Appl. (Patent) WO 9301610 (1993) |

- | | | | |
|----|---|---|--|
| 67 | Field electron emission from large-area yttrium barium copper oxide ($\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$) superconducting films in vacuum | Elizondo, J.M.
Taylor, J. | IEEE Trans. Electr. Insul. (1993) <u>28</u> , 494-99 |
| 68 | Diffusion stability of ellipsoidal field-emitter microcathodes | Eremchenko, D.V.
Makhov, V.I. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 416-17 |
| 69 | Appearance energy spectroscopy of field ions | Ernst, N. | Appl. Surf. Sci. (1993) <u>67</u> , 82-96 |
| 70 | Thermal field desorption spectroscopy of chemisorbed hydrogen for a single step site | Ernst, N.
Block, J.H.
Kreuzer, H.J.
Ye, X. | Phys. Rev. Lett. (1993) <u>71</u> , 891-4 |
| 71 | On the full-width-at-half-maximum of field ion energy distributions | Ernst, N.
Bozdech, G.
Schmidt, H.
Schmidt, W.A.
Larkins, G.L. | Appl. Surf. Sci. (1993) <u>67</u> , 111-17 |
| 72 | Field electron energy spectroscopy of 2223 BiSrCaCuO below and above T_c | Ernst, N.
Schmidt, W.A.
Kleint, C.
Melmed, A.J.
Larkins, G.L. | Physica C (1993) <u>213</u> , 495-99 |
| 73 | Comment on "Field-emission spectroscopy of single-atom tips" | Ernst, N.
Unger, J.
Fink, H.-W.
Grunze, M.
Müller, H.U.
Völkl, B.
Hofmann, M.
Wöll, C. | Phys. Rev. Lett. (1993) <u>70</u> , 2503-4 |
| 74 | Comment on "On the electron and metallic ion emission from nanotips fabricated by field-surface-melting technique: experiments on W and Au tips" by V.T. Binh and N. Garcia | Fink, H.-W. | Ultramicroscopy (1993) <u>50</u> , 101-2 |
| 75 | Vacuum emission of hot electrons from insulating and semiconducting films | Fitting, H.-J. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 433-36 |
| 76 | Tip sharpening by normal and reverse electrochemical etching | Fotino, M. | Rev. Sci. Instrum. (1993) <u>64</u> , 159-67 |
| 77 | Single-atom point source for electrons: field-emission resonance tunneling in scanning tunneling microscopy | Gadzuk, J.W. | Phys. Rev. B (1993) <u>47</u> , 12832-39 |

1993 BIBLIOGRAPHY

- | | | | |
|----|--|---|---|
| 78 | Structurally induced FEES from nanotips: implications for scanning tunneling spectroscopy | Garcia, N.
Binh, V.T.
Purcell, S.T. | Surf. Sci. (1993) <u>293</u> , L884-86 |
| 79 | Aggregates of chemisorbed copper on the (110) and (100) surfaces of tungsten | Gaudin, G.A.
Lee, M.J.G. | Surf. Sci. (1993) <u>280</u> , 91-105 |
| 80 | Measurement of gated field emitter failures | Gilmore, M.
McGruer, N.E.
Browning, J.
Bintz, W.J. | Rev. Sci. Instrum. (1993) <u>64</u> , 581-82 |
| 81 | The electric field under a STM tip apex: implications for adsorbate manipulation | Girard, C.
Joachim, C.
Chavy, C.
Sautet, P. | Surf. Sci. (1993) <u>282</u> , 400-410 |
| 82 | Ultrasharp tips for field emission applications prepared by the vapor-liquid-solid growth technique | Givargizov, E.I. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 449-53 |
| 83 | Nanometric tips for scanning probe devices | Givargizov, E.I.
Kiselev, A.N.
Obolenskaya, L.N.
Stepanova, A.N. | Appl. Surf. Sci. (1993) <u>67</u> , 73-81 |
| 84 | Erratum to "Surface self-diffusion studies on the W(112) plane by the field emission method" [Surf. Sci. <u>266</u> (1992) 30] | Gong, Y. | Surf. Sci. (1993) <u>295</u> , 485 |
| 85 | Oscillations in the carbon monoxide oxidation on platinum surfaces observed by field electron microscopy | Gorodetskii, V.
Block, J.H.
Drachsel, W.
Ehsasi, M. | Appl. Surf. Sci. (1993) <u>67</u> , 198-205 |
| 86 | Imaging the oscillating carbon monoxide-oxidation on platinum-surfaces with field ion microscopy | Gorodetskii, V.
Drachsel, W.
Block, J.H. | Catal. Lett. (1993) <u>19</u> , 223-31 |
| 87 | Layered thin-edged field-emitter device | Gray, H.F. | U.S. Patent No. 5214347 (1993) |
| 88 | Atom probe microanalysis of a nickel-base single crystal superalloy | Harada, H.
Ishida, A.
Murakami, Y.
Bhadeshia, H.K.D.H.
Yamazaki, M. | Appl. Surf. Sci. (1993) <u>67</u> , 299-304 |
| 89 | A method for preparing atom probe specimens for nanoscale compositional analysis of metallic thin films | Hasegawa, N.
Hono, K.
Okano, R.
Fujimori, H.
Sakurai, T. | Appl. Surf. Sci. (1993) <u>67</u> , 407-12 |

- | | | | |
|----|--|--|--|
| 90 | Direct observation of the motion of individual surface atoms on a picosecond timescale | Heinzelmann, H.
McClelland, G.M.
Watanabe, F. | NATO ASI Ser., Ser. E,
(Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications),
V.T. Binh, N. Garcia, and
K. Dransfeld, eds. (1993) <u>235</u> ,
111-13 |
| 91 | Observing the motion of a single adsorbed atom with picosecond and subnanometer resolution | Heinzelmann, H.
Watanabe, F.
McClelland, G.M. | Phys. Rev. Lett. (1993) <u>70</u> ,
3611-14 |
| 92 | Low-voltage field emitter array cathode for high-frequency applications | Hill, D.N.
Ohlinger, W.L.
Cochran, J.K., Jr.
Feeney, R.K.
Carter, W.B.
Harris, H.M. | J. Vac. Sci. Technol. A (1993) <u>11</u> ,
1297-1301 |
| 93 | Total-energy distribution of field-emitted electrons from a tungsten (100) surface | Hirai, Y. | Surf. Sci. (1993) <u>287-288</u> , 605-8 |
| 94 | Atom probe study of phase decomposition of an Al-7.8at.%Li alloy | Hono, K.
Babu, S.S.
Hiraga, K.
Okano, R.
Sakurai, T. | KEK Proc., 93-4 (Second
Workshop on Phase Separation
with Ordering) (1992) 5-8 |
| 95 | Atom probe compositional analysis of Co-Cr sputtered magnetic thin films | Hono, K.
Babu, S. S.
Maeda, Y.
Hasegawa, N.
Sakurai, T. | Appl. Phys. Lett. (1993) <u>62</u> ,
2504-6 |
| 96 | Atom probe analysis of a nanocrystalline Fe-C-Ta sputtered soft magnetic thin film | Hono, K.
Hasegawa, N.
Babu, S.S.
Fujimori, H.
Sakurai, T. | Appl. Surf. Sci. (1993) <u>67</u> ,
391-97 |
| 97 | Atom probe study of the crystallization process of an $\text{Fe}_{73.5}\text{Si}_{13.5}\text{B}_9\text{Nb}_3\text{Cu}_1$ amorphous alloy | Hono, K.
Li, J.-L.
Ueki, Y.
Inoue, A.
Sakurai, T. | Appl. Surf. Sci. (1993) <u>67</u> ,
398-406 |
| 98 | Atom probe analysis of sputtered Co-Cr magnetic thin films | Hono, K.
Maeda, Y.
Li, J.-L.
Sakurai, T. | Appl. Surf. Sci. (1993) <u>67</u> ,
386-90 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|--|--|--|
| 99 | APFIM studies of compositional inhomogeneity in sputtered Co-Cr thin films | Hono, K.
Maeda, Y.
Li, J.-L.
Sakurai, T. | IEEE Trans. Magn. (1993) <u>29</u> , 3745-47 |
| 100 | APFIM studies of nanostructured magnetic materials | Hono, K.
Sakurai, T. | Ann. Chim. Fr. (1993) <u>18</u> , 311-18 |
| 101 | Atom probe studies of nanocrystalline soft magnetic materials | Hono, K.
Sakurai, T. | Proc. 8th Int. Conf. on Rapidly Quenched and Metastable Materials, Aug. 22-27, 1993, Sendai, Japan |
| 102 | Atom probe study of the precipitation process in Al-Cu-Mg-Ag alloys | Hono, K.
Sano, N.
Babu, S.S.
Okano, R.
Sakurai, T. | Acta Metall. Mater. (1993) <u>41</u> , 829-38 |
| 103 | Directly patterned low voltage planar tungsten lateral field emission structures | Hoole, A.C.F.
Moore, D.F.
Broers, A.N. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 2574-78 |
| 104 | Field emission from atomic size sources | Horch, S.
Morin, R. | J. Appl. Phys. (1993) <u>74</u> , 3652-57 |
| 105 | Towards quantitative analysis of $\text{YBa}_2\text{Cu}_3\text{O}_{6.8}$ high- T_c superconductor by APFIM | Hu, Q.-H.
Stiller, K.
Andr n, H.-O. | Appl. Surf. Sci. (1993) <u>67</u> , 419-23 |
| 106 | Experimental method for preparing nanometer scale Pd probe | Huang, L.
Lee, Y.H. | Rev. Sci. Instrum. (1993) <u>64</u> , 3022-23 |
| 107 | Fabrication of large-area field-emission arrays by bonding technology | Huang, Q.A.
Xiang, T.
Qin, M.
Chen, J.N.
Zhang, H.Z.
Tong, Q.Y. | Chin. Sci. B (1993) <u>38</u> , 1866-69 |
| 108 | 200-nm gated field emitters | Huang, Z.
McGruer, N.E.
Warner, K. | IEEE Electron Device Lett. (1993) <u>14</u> , 121-2 |
| 109 | Investigation of heterogeneous $\text{Cu}_{1-x}\text{Co}_x$ alloys with giant magnetoresistance | H tten, A.
Thomas, G. | Ultramicroscopy (1993) <u>52</u> , 581-90 |
| 110 | Work-function anisotropies as an origin of long-range surface forces - Comment (Technical Note) | Inglesfield, J.E. | Phys. Rev. L (1993) <u>70</u> , 246 |

- | | | | |
|-----|--|--|--|
| 111 | Influence of cathode material on emission characteristics of field emitters for microelectronics devices | Ishikawa, J.
Tsuji, H.
Gotoh, Y.
Sasaki, T.
Kaneko, T.
Nagao, M.
Inoue, K. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 403-6 |
| 112 | Estimation of metal-deposited field emitters for the micro vacuum tube | Ishikawa, J.
Tsuji, H.
Inoue, K.
Nagao, M.
Sasaki, T.
Kaneko, T.
Gotoh, Y. | Jpn. J. Appl. Phys. (1993) <u>32</u> , Pt. 2, No. 3A, L342-45 |
| 113 | Stable field emission and surface evaluation of surface-processed NbC(110) tips | Ishizawa, Y.
Aizawa, T.
Otani, S. | Appl. Surf. Sci. (1993) <u>67</u> , 36-42 |
| 114 | Characteristics of a microfabricated field emitter | Ishizuka, H.
Nakahara, Y. | Fukuoka Kogyo Daigaku
Erekutoronikusu Kenkyusho
Shoho (1993) <u>10</u> , 51-57 |
| 115 | Field-emission cathodes | Ito, S.
Watanabe, T.
Taniguchi, M. | Jpn. Kokai Tokkyo Koho (Patent)
JP 05094760 (1993) |
| 116 | Field-emission electron source | Ito, Y. | Jpn. Kokai Tokkyo Koho (Patent)
JP 05067426 (1993) |
| 117 | Fabrication and characterization of comb-shaped lateral field-emitter arrays | Itoh, J.
Tsuburaya, K.
Kanemaru, S.
Watanabe, T.
Itoh, S. | Jpn. J. Appl. Phys. (1993) <u>32</u> , Pt. 1, No. 3A, 1221-26 |
| 118 | Vacuum microtriode with comb-shaped lateral field-emitter array | Itoh, J.
Ushiki, K.
Tsuburaya, K.
Kanemaru, S. | Jpn. J. Appl. Phys. (1993) <u>32</u> , Pt. 2, No. 6A, L809-12 |
| 119 | Influences of gases on field emission | Itoh, S.
Niiyama, T.
Yokoyama, M. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 647-50 |
| 120 | Investigation of cathodoluminescent display device with field emission cathodes | Itoh, S.
Watanabe, T.
Ohtsu, K.
Yokoyama, M.
Taniguchi, M. | Jpn. J. Appl. Phys. (1993) <u>32</u> , Pt. 1, No. 9A, 3955-61 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|---|---|---|
| 121 | Atomic scale studies of the mechanisms of internal oxidation | Jang, H.
Chan, D.K.
Seidman, D.N.
Merkle, K.L. | Scr. Metall. Mater. (1993) <u>29</u> , 69-74 |
| 122 | The chemical composition of a metal/ceramic interface of an atomic scale: The Cu/MgO {111} interface | Jang, H.
Seidman, D.N.
Merkle, K.L. | Interface Sci. (1993) <u>1</u> , 61-75 |
| 123 | Atomic scale studies of the chemistry of the Cu/MgO {111} heterophase interface | Jang, J.
Seidman, D.N.
Merkle, K.L. | Mater. Sci. Forum (1993) <u>126-128</u> , 639-42 |
| 124 | An atom probe characterization of carbon-doped NiAl | Jayaram, R.
Miller, M.K. | Appl. Surf. Sci. (1993) <u>67</u> , 311-15 |
| 125 | An APFIM/AEM investigation of precipitates in model vanadium alloys | Jayaram, R.
Miller, M.K. | Appl. Surf. Sci. (1993) <u>67</u> , 380-85 |
| 126 | Characterization of doped nickel aluminide (NiAl) by atom probe field ion microscopy | Jayaram, R.
Miller, M.K. | Mater. Res. Soc. Symp. Proc. (1993) <u>288</u> , 355-60 |
| 127 | Applications of the atom probe field ion microscope to the atomic level characterization of metals and alloys | Jayaram, R.
Miller, M.K. | Proc. 27th Annual Meeting of the Microbeam Analysis Society (MAS), J. T. Armstrong and J. R. Porter, eds., VCH Publishers, Deerfield Beach, FL (1993) <u>2S</u> , S130-31 |
| 128 | An atom probe study of the substitutional behaviour of beryllium in NiAl | Jayaram, R.
Russell, K.F.
Miller, M.K. | Appl. Surf. Sci. (1993) <u>67</u> , 316-20 |
| 129 | Emission area of a field emitter array | Jenkins, D.W. | IEEE Trans. Electron Devices (1993) <u>40</u> , 666-72 |
| 130 | Numerical simulation of field emission and tunneling: A comparison of the Wigner function and transmission coefficient approaches | Jensen, K.L.
Ganguly, A.K. | J. Appl. Phys. (1993) <u>73</u> , 4409-27 |
| 131 | Numerical simulation of field emission from silicon | Jensen, K.L.
Ganguly, A.K. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 371-78 |
| 132 | Field emission from an elliptical boss: exact versus approximate treatments | Jensen, K.L.
Zaidman, E.G. | Appl. Phys. Lett. (1993) <u>63</u> , 702-4 |
| 133 | Electron field emission from selectively contaminated cathodes | Jimenez, M.
Noer, R.J.
Jouve, G.
Antoine, C.
Jodet, J.
Bonin, B. | J. Phys. D: Appl. Phys. (1993) <u>26</u> , 1503-9 |

- | | | | |
|-----|--|--|---|
| 134 | Adsorption of gold and silver on the tungsten (110) surface studied by field emission microscopy | Jones, J.P. | J. Solid State Chem. (1993) <u>104</u> , 149-59 |
| 135 | The field-induced states at the surfaces of the nearly-free-electron metals | Jurczyszyn, L.
Steslicka, M. | Czech. J. of Phys. (1993) <u>43</u> , 925-32 |
| 136 | Manufacture of field-emission electron source | Kanazawa, T.
Sakamoto, H.
Hashiguchi, G. | Jpn. Kokai Tokkyo Koho (Patent) JP 05182583 (1993) |
| 137 | A field emission device and method for forming | Kane, R.C.
Hilgers, K.B. | EPO (Patent) 523980 (1993) |
| 138 | Electron field emission device | Kaneko, A.
Kanno, T.
Tomii, K. | U.S. Patent No. 5243252 (1993) |
| 139 | X-ray diode using a silicon field emission photocathode | Karain, W.I.
Knight, L.V.
Allred, D.D.
Reyes-Mena, A. | Proc. SPIE-Int. Soc. Opt. Eng., 1741 (Soft X-Ray Microscopy), 12-18 |
| 140 | Pulse methods when studying field electronic emission | Karpov, A.G. | Instrum. Exper. Tech. (1993) <u>36</u> , No. 1, Pt. 2, 118-21 |
| 141 | Diffusion behavior of Pt adatoms and clusters on the Rh(100) surface | Kellogg, G.L. | Appl. Surf. Sci. (1993) <u>67</u> , 134-41 |
| 142 | Atomic-level studies of diffusion on metal surfaces | Kellogg, G.L. | Jpn. J. Appl. Phys. (1993) <u>32</u> , Pt. 1, No. 3B, 1463-69 |
| 143 | Diffusion of individual platinum atoms on single-crystal surfaces of rhodium | Kellogg, G.L. | Phys. Rev. B (1993) <u>48</u> , 11305-12 |
| 144 | Electric field inhibition and promotion of exchange diffusion on Pt(001) | Kellogg, G.L. | Phys. Rev. Letts. (1993) <u>70</u> , 1631-34 |
| 145 | The effect of an externally applied electric field on the reconstruction of platinum (110) | Kellogg, G.L. | Surf. Sci. (1993) <u>290</u> , 295-301 |
| 146 | Field emission device modeling for application to flat panel displays | Kesling, W.D.
Hunt, C.E. | J. Vac. Sci. Technol. (1993) <u>11</u> , 518-22 |
| 147 | Image plane position at a charged surface of stabilized jellium | Kiejna, A. | Surf. Sci. (1993) <u>287/288</u> , 618-21 |
| 148 | Oxygen processed field emission tips for microcolumn applications | Kim, H.S.
Yu, M.L.
Stauffer, U.
Murray, L.P.
Kern, D.P.
Chang, T.H.P. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 2327-31 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|---|---|---|
| 149 | Fabrication and characterization of lateral "cusp-edge" and "knife-edge" geometry cathodes | Kim, J.M.
Carr, W.N.
Zeto, R.J. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 459-63 |
| 150 | Microfield emitter array triodes with electron bombarded semiconductor anode | Kitamura, M.
Tanoue, K. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 474-76 |
| 151 | On the early history of field emission including attempts of tunneling spectroscopy | Kleint, C. | Prog. Surf. Sci. (1993) <u>42</u> , 101-15 |
| 152 | Design, fabrication, and characterization of a hot-electron vacuum transistor | Klemer, D.P.
Chen, C.-Y.
Shieh, T.-J.
Pujara, M. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 418-21 |
| 153 | Atomic-like states at atoms on transition metal surfaces | Knor, Z. | Chem. Phys. Lett. (1993) <u>201</u> , 97-100 |
| 154 | Probing local binding energy differences on the silicon (001) 2 X 1 surface by field-induced atom extraction with the STM | Kobayashi, A.
Grey, F.
Snyder, E.
Aono, M. | Surf. Sci. (1993) <u>291</u> , L739-44 |
| 155 | Impregnated cathode emitters | Koizumi, Y.
Saito, S. | Jpn. Kokai Tokkyo Koho (Patent) JP 05225894 (1993) |
| 156 | Design and technology features of heating-free magnetrons with autoemission excitation | Kolpylov, M.F. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 481-83 |
| 157 | Manufacture of field emission electrodes | Kondo, Y.
Matsura, J. | Jpn. Kokai Tokkyo Koho (Patent) JP 05021003 (1993) |
| 158 | Atomic scale observations of solute-atom segregation at grain boundaries in an iron (silicon) alloy | Krakauer, B.W.
Seidman, B.W. | Mater. Sci. Forum (1993) <u>126-128</u> , 161-64. |
| 159 | Absolute atomic-scale measurements of the Gibbsian interfacial excess of solute at internal interfaces | Krakauer, B.W.
Seidman, D.N. | Phys. Rev. B (1993) <u>48</u> , 6724-27 |
| 160 | Physics and chemistry in high electric fields | Kreuzer, H.J. | Report, TR-10; Order No. AD-A257138, 14 pp. Avail. NTIS from: Govt. Rep. Announce. Index (U.S.) (1993) <u>93</u> , Abstr. No. 306,138 |

- | | | | |
|-----|--|---|---|
| 161 | Lensless low energy electron point source microscopy | Kreuzer, H.J.
Wierzbicki, A.
Crawford, M.G.A.
Roald, C.B. | NATO ASI Ser., Ser. E
(Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications),
V.T. Binh, N. Garcia, and
K. Dransfeld, eds. (1993) <u>235</u> ,
35-44 |
| 162 | Co-induced morphological changes of Rh crystallites - Mechanisms, kinetics, and real-space imaging on the atomic-scale | Kruse, N.
Gaussman, A. | J. Catal. (1993) <u>144</u> , 525-43 |
| 163 | Adsorbate-induced structural changes of Rh field emitter tips | Kruse, N.
Gaussmann, A. | Appl. Surf. Sci. (1993) <u>67</u> ,
160-65 |
| 164 | Automated atom probe with space-time ion focusing | Kudryavtsev, A.N.
Nikonenkov, N.V.
Kashirtsev, Y.I.
Arbuzov, Y.V.
Konin, A.A.
Stukalin, V.N. | Prib. Tekh. Eksp. (1993) <u>4</u> ,
138-44; English Transl.: Instrum.
Exper. Tech. (1993) <u>36</u> , No. 4,
Pt. 2, 591-94 |
| 165 | Method of forming field emitter device with diamond emission tips | Kumar, N. | U.S. Patent No. 5199918 (1993) |
| 166 | Model-potential calculations of tunnelling rate constants for the field-ion microscope | Lam, S.C.
Needs, R.J. | J. Phys.: Condens. Matter (1993)
<u>5</u> , 1195-1202 |
| 167 | First-principles calculations of the screening of electric fields at the aluminium (111) and (110) surfaces | Lam, S.C.
Needs, R.J. | J. Phys.: Condens. Matter (1993)
<u>5</u> , 2101-8 |
| 168 | Imaging atoms in the field-ion microscope: tunneling calculations using realistic potentials | Lam, S.C.
Needs, R.J. | Phys. Rev. B (1993) <u>48</u> ,
14698-701 |
| 169 | Field-induced transfer of an electropositive atom between two closely spaced electrodes | Lang, N.D. | NATO ASI Ser., Ser. E
(Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications),
V.T. Binh, N. Garcia, and
K. Dransfeld, eds. (1993) <u>235</u> ,
177-83 |
| 170 | Simulated electron beam trajectories toward a field ion microscopy specimen | Larson, D.J.
Camus, P.P.
Kelly, T.F. | Appl. Surf. Sci. (1993) <u>67</u> ,
473-80 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|--|---|---|
| 171 | Development of knife-edge field emission cathodes on (110) silicon wafers | Lee, B.
Barasch, E.F.
Mazumdar, T.
McIntyre, P.M.
Pang, Y.
Trost, H.-J. | Appl. Surf. Sci. (1993) <u>67</u> , 66-72 |
| 172 | Grain boundary segregation in nickel base superalloys Astroloy: an atom-probe study | Letellier, L.
Chambreland, S.
Duval, P.
Blavette, D. | Appl. Surf. Sci. (1993) <u>67</u> , 305-10 |
| 173 | Electron emission from an individual, supported C ₆₀ molecule | Lin, M.E.
Andres, R.P.
Reifenberger, R.
Huffman, D.R. | Phys. Rev. B (1993) <u>47</u> , 7546-53 |
| 174 | Electron emission from nanometer-size metallic clusters: Electronic states and structural stability of supported Au clusters | Lin, M.E.
Ramachandra, A.
Andres, R.P.
Reifenberger, R. | NATO ASI Ser., Ser. E
(Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications),
V.T. Binh, N. Garcia, and
K. Dransfeld, eds. (1993) <u>235</u> , 77-88 |
| 175 | Field emission from structures with quantum wells | Litovchenko, V.G.
Kryuchenko, Y.V. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 362-65 |
| 176 | Emission properties of field cathode tips and structures with quantum wells | Litovchenko, V.G.
Kryuchenko, Y.V.
Il'chenko, L.G. | J. Micromech. Microeng. (1993) <u>3</u> , 74-80 |
| 177 | Field emission from silicon through stable contaminant layers | Liu, J.
Hren, J.J.
Son, U.T.
Jones, G.W.
Sune, C.T. | Appl. Surf. Sci. (1993) <u>67</u> , 48-55 |
| 178 | Spinodal decomposition of copper-cobalt alloys: a computer simulation and some FIM results | Liu, J.M.
Busch, R.
Gaertner, F.
Haasen, P.
Liu, Z.G.
Wu, Z.C. | Phys. Status Solidi A (1993) <u>138</u> , 157-74 |
| 179 | Formation of silicon carbide films on silicon field emitters | Liu, J.
Son, U.T.
Stepanova, A.N.
Christensen, K.N.
Wojak, G.W.
Givargizov, E.I.
Bachmann, K.J.
Hren, J.J. | Mater. Res. Soc. Symp. Proc.
(1993) <u>311</u> , 21-26 |

- | | | | |
|-----|---|---|---|
| 180 | Field desorption of carbon oxides from the surface of HTSC-material | Loginov, M.V.
Saveljev, O.G.
Shrednik, V.N. | Pis'ma Zh. Tekh. Fiz (1993) <u>19</u> , 71-76 |
| 181 | A study of phase decomposition in Cu-Ni-Fe alloys | Lopez, V.M.
Sano, N.
Sakurai, T.
Hirano, K. | Acta Metall. Mater. (1993) <u>41</u> , 265-71 |
| 182 | Ion projection lithography for vacuum microelectronics | Löschner, H.
Stengl, G.
Chalupka, A.
Fegeri, J.
Fischer, F.
Lammer, G.
Malek, L.
Nowak, R.
Traher, C.
Wolf, P. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 487-92 |
| 183 | On the performance of a microchannel plate detector used for atom-probe analysis | Lundin, L.
Rolander, U. | Appl. Surf. Sci. (1993) <u>67</u> , 459-66 |
| 184 | Silicon tip field emission cathode arrays and fabrication thereof | MacDonald, N.C.
Spallas, J.P. | U.S. Patent No. 5199917 (1993) |
| 185 | Atom-probe microanalysis of metallic nanostructured materials | MacKenzie, R.A.D.
Cerezo, A.
Conyers, J.S.
Petford-Long, A.K.
Sijbrandij, S.J.
Smith, G.D.W. | Mater. Res. Soc. Symp. Proc. (1993) <u>286</u> , 167-72 |
| 186 | Characterization of nanometer-scale compositional variations using field ion microscopy and the position sensitive atom probe | Mackenzie, R.A.D.
Cerezo, A.
Smith, G.D.W. | Nanostruct. Mater. (1993) <u>3</u> , 203-10 |
| 187 | High current density field emission from transition metal carbides | Mackie, W.A.
Hartman, R.L.
Davis, P.R. | Appl. Surf. Sci. (1993) <u>67</u> , 29-35 |
| 188 | Variation of the binding-energy due to high electrostatic fields (NO on Rh(111)) | Madenach, R.P.
Abend, G.
Kreuzer, H.J.
Block, J.H. | Ber. Bun. Ges (1993) <u>97</u> , 353-55 |
| 189 | Experiments on enhanced field emission of niobium cathodes | Mahner, E.
Minatti, N.
Piel, H.
Pupeter, N. | Appl. Surf. Sci. (1993) <u>67</u> , 23-28 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|--|--|---|
| 190 | Energy spread of a focused ion beam system with a supertip | Maisch, T.
Wilbertz, C.
Miller, T.
Kalbitzer, S. | Nucl. Instrum. Methods Phys. Res. B (1993) <u>80/81</u> , 1288-91 |
| 191 | Field-emission electron-beam sources and fabrication thereof | Maruo, J.
Ise, T.
Urayama, M.
Akagi, Y. | Jpn. Kokai Tokkyo Koho (Patent) JP 05047296 (1993) |
| 192 | Field-emission electronic device | Maruo, Y.
Akagi, Y.
Ise, T.
Urayama, M. | Eur. Pat. Appl. (Patent) EP 535953 (1993) |
| 193 | Field-induced electron emission from broad-area yttrium barium copper oxide high-Tc electrodes | Mazurek, B.
Xu, N.S.
Latham, R.V. | J. Mater. Sci. (1993) <u>28</u> , 2833-39 |
| 194 | Ion-space-charge initiation of gated field emitter failure | McGruer, N.E.
Browning, J.
Meassick, S.
Gilmore, M.
Bintz, W.J.
Chan, C. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 441-44 |
| 195 | Planar-processed tungsten and polysilicon vacuum microelectronic devices with integral cavity sealing | Mei, Q.
Tamagawa, T.
Ye, C.
Lin, Y.
Zurn, S.
Polla, D.L. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 493-96 |
| 196 | Velocity and ion species dependence of the gain of microchannel plates | Meier, R.E. | Int. J. Mass Spectrom. Ion Processes (1993) <u>123</u> , 19-27 |
| 197 | APFIM observations of various forms of HTSC's | Melmed, A.J.
Camus, P.P.
Vargas, J.
Larbalestier, D.C. | Appl. Surf. Sci. (1993) <u>67</u> , 413-18 |
| 198 | Field ion microscopy of the polyphasic structure of yttrium barium cuprate ($\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$) | Mikhailovskii, I.M.
Ksenofontov, V.A.
Sadanov, E.V.
Velikodnaya, O.A. | Pis'ma Zh. Eksp. Teor. Fiz. (1993) <u>57</u> , 39-42; English Trans.: JETP Lett. (1993) <u>57</u> , 40-42 |
| 199 | Structure of platinum(100) for nitric oxide adsorption studied by FEM and LEED | Miki, H.
Nagase, T.
Sato, K.
Watanabe, H.
Sugai, S.
Kawasaki, K.
Kioka, T. | Surf. Sci. (1993) <u>287-288</u> , 448-54 |

- | | | | |
|-----|--|---|---|
| 200 | Comparison of models for deconvoluting the compositions of coexisting phases | Miller, M.K.
Bowman, K.O.
Cerezo, A.
Hyde, J. M. | Appl. Surf. Sci. (1993) <u>67</u> , 429-35 |
| 201 | An APFIM/AEM characterization of alloy X750 | Miller, M.K.
Burke, M.G. | Appl. Surf. Sci. (1993) <u>67</u> , 292-98 |
| 202 | An APFIM survey of grain boundary segregation and precipitation in irradiated pressure vessel steels | Miller, M.K.
Burke, M.G. | Effects of Radiation on Materials (Proc. 16th International Symposium on Radiation Materials), A.S. Kumar, D.S. Gelles, R.K. Nanstad and E.A. Little, eds., American Society for Testing and Materials, Philadelphia, PA, ASTM STP (1993) <u>1175</u> , 492-502 |
| 203 | Characterization of copper precipitation in a 17/4 PH steel: A combined APFIM/TEM study | Miller, M.K.
Burke, M.G. | Proc. 5th Inter. Conference on Environmental Degradation of Materials in Nuclear Power Systems-Water Reactors, E. Simonen, ed., American Nuclear Society, LaGrange Park, IL (1993) 689-95 |
| 204 | Characterization of a $\Sigma 9$ grain boundary in Fe-45%Cr | Miller, M.K.
Jayaram, R. | Appl. Surf. Sci. (1993) <u>67</u> , 356-60 |
| 205 | Characterization of internal interfaces by atom probe field ion microscopy | Miller, M.K.
Jayaram, R. | Atomic Scale Imaging of Surfaces and Interfaces (Proc. Materials Research Society Fall '92 Meeting), D.K. Biegelsen, D.J. Smith and S.Y. Tong, eds., Materials Research Society, Pittsburgh, PA (1993) <u>295</u> , 247-52 |
| 206 | Atom probe field ion microscopy characterizations of VVER steels | Miller, M.K.
Jayaram, R.
Othen, P.J.
Brauer, G. | Proc. 6th International Conference on Environmental Degradation of Materials in Nuclear Power Systems - Water Reactors, R.E. Gold and E.P. Simonen, eds., Miner. Metals and Mater. Society (1993) 161-69 |
| 207 | Proc. 39th Intern. Field Emission Symposium | Miller, M.K.
Kreuzer, H.J., eds. | Appl. Surf. Sci. (1993) <u>67</u> , 502 pp. |
| 208 | Russian Translation: "Atom Probe Microanalysis: Principles and applications to materials problems" | Miller, M.K.
Smith, G.D.W. | Translator, A.L. Suvorov, MIR, Moscow, Russia (1993) |

1993 BIBLIOGRAPHY

- | | | | |
|-----|--|---|---|
| 209 | Chinese Translation: "Atom Probe Microanalysis: Principles and Application to Materials Problems" | Miller, M.K.
Smith, G.D.W. | Translators, Y. H. Gong and W. Sha, Peking University Press, Peking, China (1993) |
| 210 | A new FEL concept driven by a vacuum microfield emitter | Mima, K.
Nakai, S.
Taguchi, T.
Ohigashi, N.
Tsunawaki, Y.
Imasaki, K.
Yamanaka, C.
Shiho, M. | Nucl. Instrum. Methods Phys. Res. A (1993) <u>331</u> , 550-53 |
| 211 | Positive charge and interface state creation at the silicon-silica interface during low-fluence and high-field electron injections | Mir, A.
Vuillaume, D. | Appl. Phys. Lett. (1993) <u>62</u> , 1125-27 |
| 212 | Energy exchange processes in field emission from atomically sharp metallic emitters | Miskovsky, N.M.
Sookyung, H.P.
He, J.
Cutler, P.H. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 366-70 |
| 213 | Atomic manipulation using field evaporation | Miskovsky, N.M.
Tsong, T.T.
Wei, C.M. | NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) <u>235</u> , 207-12 |
| 214 | Miniaturized liquid metal ion sources (MILMIS) | Mitterauer, J. | NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) <u>235</u> , 139-64 |
| 215 | Dynamic field (DF)-emission: stability criteria of microscopic field emission sites | Mitterauer, J.
Till, P. | Appl. Surf. Sci. (1993) <u>67</u> , 17-22 |
| 216 | Field emission spectroscopy | Modinos, A. | Prog. Surf. Sci. (1993) <u>42</u> , 45-54 |
| 217 | Metallic materials | Morikawa, H. | Bunseki (1993) <u>10</u> , 795-98 |
| 218 | Analysis of some properties of metal-glass microemitters subjected to strong electric fields | Mousa, M.S.
Hibbert, D.B. | Appl. Surf. Sci. (1993) <u>67</u> , 59-65 |
| 219 | Field emission of electrons from glass tips with internal conducting coats | Mousa, M.S.
Hibbert, D.B. | J. Phys. D: Appl. Phys. (1993) <u>26</u> , 697-703 |

- | | | | |
|-----|--|--|--|
| 220 | The effect of hydrogen and acetylene processing on microfabricated field emitter arrays | Mousa, M.S.
Holland, C.E.
Brodie, I.
Spindt, C.A. | Appl. Surf. Sci. (1993) <u>67</u> , 218-21 |
| 221 | Observations of work function changes in field-emitter arrays | Mousa, M.S.
Schwoebel, P.R.
Brodie, I.
Spindt, C.A. | Appl. Surf. Sci. (1993) <u>67</u> , 56-58 |
| 222 | Emission properties of electron point sources | Müller, H.U.
Völkel, B.
Hofmann, M.
Wöll, C.
Grunze, M. | Ultramicroscopy (1993) <u>50</u> , 57-64 |
| 223 | Fabrication and characterization of electron beam-evaporated silicon field emitter arrays | Myers, G.P.
Aslam, M.
Klimecky, P.
Cathey, L.W.
Elder, R.E.
Artz, B.E. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 642-46 |
| 224 | Measurement of emission characteristics of metal-deposited field emitter | Nagao, M.
Inoue, K.
Sasaki, T.
Kaneko, T.
Gotoh, Y.
Tsuji, H.
Ishikawa, J. | Shinku (1993) <u>36</u> , 328-30 |
| 225 | Theory of adsorption and desorption in high electric fields | Neugebauer, J.
Scheffler, M. | Surf. Sci. (1993) <u>287-288</u> , 572-76 |
| 226 | Physical basis for applying the Fowler-Nordheim J-E relationship to experimental I-V data | Nicolaescu, D. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 392-95 |
| 227 | An atom probe study of the site preference of Ge in Ni ₃ Al | Numakura, H.
Yamada, T.
Koiwa, M.
Szabo, I. A.
Hono, K.
Sakurai, T. | Defect Diffus. Forum (1993) <u>95-98</u> , 869-74 |
| 228 | Planar field-emission device | Nureki, C.
Ran, M. | Jpn. Kokai Tokkyo Koho (Patent) JP 05190078 (1993) |
| 229 | Model for predicting the effects of device geometry on the capacitance of field emitter array cathodes | Ohlinger, W.L.
Hill, D.N.
Feeney, R.K.
Munne, V. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 1270-74 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|---|--|--|
| 230 | Synthesis of tungsten disulfide on tungsten-tip directly inside FIM | Ohmae, N.
Mori, N.
Tagawa, M.
Umeno, M. | Tribol. Ser. (1993) <u>25</u> , 127-36 |
| 231 | Cage structure of fullerene (C ₆₀) observed by field ion microscopy | Ohmae, N.
Tagawa, M.
Umeno, M. | J. Phys. Chem. (1993) <u>97</u> , 11366-67 |
| 232 | FIM observations of palladium/M (M: tungsten, molybdenum, tantalum, niobium) atomic interfaces and Pd growth layer | Okuno, K. | Shinku (1993) <u>36</u> , 650-56 |
| 233 | Lateral field-emission devices with subtentth-micron emitter to anode spacing | Oro, J.A.
Ball, D.D. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 464-67 |
| 234 | An APFIM study of the microstructure of a ferrite alloy after high fluence neutron irradiation | Pareige, P.
Van Duysen, J.C.
Auger, P. | Appl. Surf. Sci. (1993) <u>67</u> , 342-47 |
| 235 | Thermo-field emission and the Nottingham effect | Paulini, J.
Klein, T.
Simon, G. | J. Phys. D: Appl. Phys. (1993) <u>26</u> , 1310-15 |
| 236 | Fabrication of 0.4 µm grid apertures for field-emission array cathodes | Peters, D.
Bartsch, W.
Stephani, D.
Holland, C.E.
Spindt, C.A. | Microelectron. Eng. (1993) <u>21</u> , 467-70 |
| 237 | Early stages of the oxidation and corrosion of copper and copper-alloys using nanometer-scale techniques | Pickering, H.W.
Sakurai, T. | Rev. Metall. (1993) <u>90</u> , 1647-54 |
| 238 | Instability of the metal microcrystal surface at intense electron emission | Pütsin, V.E. | J. Vac. Sci. Technol. A (1993) <u>11</u> , 2447-51 |
| 239 | Electron optical properties of nanometer field emission electron sources | Qian, W.
Scheinfein, M.R.
Spence, J.C.H. | Appl. Phys. Lett. (1993) <u>62</u> , 315-17 |
| 240 | Brightness measurements of nanometer-sized field-emission-electron sources | Qian, W.
Scheinfein, M.R.
Spence, J.C.H. | J. Appl. Phys. (1993) <u>73</u> , 7041-45 |
| 241 | Transmission low-energy electron diffraction (TLEED) and its application to the low-voltage point-projection microscope | Qian, W.
Spence, J.C.H.
Zuo, J.M. | Acta Crystallogr. A (1993) <u>49</u> , 436-45 |

- 242 A study of atomic distribution in the intermetallic compound by AP-FIM Ren, D.G. Proc. 1st Meeting of the Pacific Rim International Conf. on Advanced Material Processes, C. Shi, H. Li, S. Hengde and S. Alexander, eds., Miner. Metals and Mater. Society, Warrendale, PA (1992) 367-72
- 243 Oscillatory compositional depth profiles in surface segregation of a Pt-Rh alloy Ren, D.M. Qin, J.H. Wang, J.B. Tsong, T.T. Phys. Rev. B (1993) 347, 3944-46
- 244 Negative ion formation by field ionization on a polymer layer grown by field polymerization of tetracyanoethylene Röllgen, F.W. Schmidt, U. Schmitz, R. Theiss, A. Appl. Surf. Sci. (1993) 67, 128-33
- 245 Manufacture of field-emission cathodes Sakai, J. Kumagai, M. Jpn. Kokai Tokkyo Koho (Patent) JP 05225895 (1993)
- 246 Field evaporation of germanium(111) surfaces in presence of hydrogen Sakata, T. Block, J.H. Naschitzki, M. Schmidt, W.A. Jpn. J. Appl. Phys. (1993) 32, 5076-79
- 247 Microanalysis of composite precipitates by atom-probe field ion microscopy Sano, N. Sumitomo Search (1993) 54, 87-97
- 248 Ion current characteristics of an argon field ionization source Sato, M. Surf. Sci. (1993) 285, L525-27
- 249 Molecular orbital theory of field evaporation Sawamura, M. Tsukada, M. Aono, M. Jpn. J. Appl. Phys. (1993) 32, 3257-60
- 250 Aberrations of emission cathodes: Nanometer diameter field-emission electron sources Scheinfein, M.R. Qian, W. Spence, J.C.H. J. Appl. Phys. (1993) 73, 2057-68
- 251 Time aberrations of uniform fields: An improved reflectron mass spectrometer for an atom-probe field-ion microscope Scheinfein, M.R. Seidman, D.N. Rev. Sci. Instrum. (1993) 64, 3126-31
- 252 Combined electron and ion projection microscopy Schmid, H. Fink, H.-W. Appl. Surf. Sci. (1993) 67, 436-43
- 253 Local electric fields at individual atomic surface sites: field ion appearance energy measurements Schmidt, W.A. Ernst, N. Suchorski, Y. Appl. Surf. Sci. (1993) 67, 101-10
- 254 Analytical field ion microscopy of the early stages of the solid state amorphization reaction in vapor-deposited zirconium/cobalt double layers Schneider, S. Busch, R. Bolse, W. Samwer, K. J. Non-Cryst. Solids (1993) 156-158, 498-501

1993 BIBLIOGRAPHY

- | | | | |
|-----|---|---|---|
| 255 | Field-emitter array performance enhancement using hydrogen glow discharges | Schwoebel, P.R.
Spindt, C.A. | Appl. Phys. Lett. (1993) <u>63</u> , 33-35 |
| 256 | Field-Ion Microscopy: Atom-Probe Microanalysis | Seidman, D.N. | Concise Encyclopedia of Materials Characterization, Robert W. Cahn and E. Lifshin, eds., Pergamon, New York (1993) 151-54 |
| 257 | Field-Ion Microscopy: Observation of Radiation Effects | Seidman, D.N. | Concise Encyclopedia of Materials Characterization, Robert W. Cahn and E. Lifshin, eds., Pergamon, New York (1993) 154-55 |
| 258 | Shape control possibility of field emission cathode tip fabricated with sputtering deposition | Seko, N.
Ishikura, O.
Okamoto, A.
Inoue, K.
Suzuki, Y.
Ogawa, S. | Shinku (1993) <u>36</u> , 375-78 |
| 259 | Position sensitive atom probe study of the decomposition of a Cu-2.6 at. % Co alloy | Setna, R.P.
Hyde, J.M.
Cerezo, A.
Smith, G.D.W.
Chisholm, M.F. | Appl. Surf. Sci. (1993) <u>67</u> , 368-79 |
| 260 | Phase chemistry and precipitation reactions in maraging steels: Part I. Introduction and study of Co-containing C-300 steel | Sha, W.
Cerezo, A.
Smith, G.D.W. | Metall. Trans. (1993) <u>24A</u> , 1221-33 |
| 261 | Phase chemistry and precipitation reactions in maraging steels: Part II. Co-free T-300 steel | Sha, W.
Cerezo, A.
Smith, G.D.W. | Metall. Trans. (1993) <u>24A</u> , 1233-39 |
| 262 | Phase chemistry and precipitation reactions in maraging steels: Part III. Model alloys | Sha, W.
Cerezo, A.
Smith, G.D.W. | Metall. Trans. (1993) <u>24A</u> , 1241-49 |
| 263 | Phase chemistry and precipitation reactions in maraging steels: Part IV. Discussion and conclusions | Sha, W.
Cerezo, A.
Smith, G.D.W. | Metall. Trans. (1993) <u>24A</u> , 1251-56 |
| 264 | Comparison of a triangular-shape field emitter array and flat surface-emitter vacuum diodes | Shieh, J.L.
Ren, R.J.
Shieh, T.J.
Klemer, D.P.
Chen, C.Y. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 501-4 |
| 265 | Pulsed field cleaning of the surface of sharp field electron emitters | Shilimanov, S.N.
Shkuratov, S.I. | Instrum. Exp. Tech. (1993) <u>36</u> , No. 2, 260-63 |
| 266 | High-temperature superconducting thin films in strong electric fields | Shkuratov, S.I. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 353-61 |

- | | | | |
|-----|--|--|---|
| 267 | Limiting current densities of $\text{YBa}_2\text{Cu}_3\text{O}_{6.9}$ single crystal submicron specimens | Shkuratov, S.I.
Ivanov, S.N.
Shilimanov, S.N. | Physica C (1993) <u>211</u> , 158-64 |
| 268 | Field electron emission microscopy and spectroscopy of $\text{YBa}_2\text{Cu}_3\text{O}_{6.9}$ single crystals at different temperatures | Shkuratov, S.I.
Ivanov, S.N.
Shilimanov, S.N. | Physica C (1993) <u>213</u> , 321-26 |
| 269 | Preparation of high temperature superconducting single-crystal sharp-pointed specimens for field electron emission microscopy and spectroscopy | Shkuratov, S.I.
Shilimanov, S.N.
Ivanov, S.N. | Supercond. Sci. Technol. (1993) <u>6</u> , 520-24 |
| 270 | Effect of switching over $\text{YBa}_2\text{Cu}_3\text{O}_x$ thin films from the superconducting to the normal state under the action of field-emission currents | Shkuratov, S.I.
Shilimanov, S.N.
Skokov, V.N. | Phys. Rev. B (1993) <u>48</u> , 6456-59 |
| 271 | Field evaporation and field desorption from HTSC single-crystal surfaces | Shrednik, V.N. | Prog. Surf. Sci. (1993) <u>42</u> , 131-42 |
| 272 | Analysis of the possibility of performing microelectronic microwave vacuum devices with extended interaction on field emitter arrays | Sinit syn, N.I.
Gulyaev, Y.V.
Golant, M.B.
Nefyodov, I.S.
Torgashov, G.V.
Zakharchenko, Y.F.
Zhbanov, A.I. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 477-80 |
| 273 | Possibility of amplification of microwaves using the negative conduction of an electron beam (polytron) | Solntsev, V.A. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 484-86 |
| 274 | A development in the preparation of sharp scanning tunneling microscopy tips | Song, J.P.
Pryds, N.H.
Glejbøl, K.
Mørch, K.A.
Thölen, A.R.
Christensen, L.N. | Rev. Sci. Instrum. (1993) <u>64</u> , 900-03 |
| 275 | Diffusion of oxygen on the Mo(110) plane | Song, Y.
Gomer, R. | Surf. Sci. (1993) <u>290</u> , 1-14 |
| 276 | FEM study of CO and H_2 interaction with a supported bimetallic catalyst: Mo-Pd/ $\text{Al}_2\text{O}_3/\text{W}$ | Sotola, J.
Knor, Z. | Collect. Czech. Chem. Commun. (1993) <u>58</u> , 2695-700 |
| 277 | FEM study of palladium and molybdenum clusters on an alumina covered field emitter | Sotola, J.
Knor, Z. | Czech. J. Phys. (1993) <u>43</u> , 1009-13 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|--|---|---|
| 278 | Self-aligned silicon field emission cathode arrays formed by selective, lateral thermal oxidation of silicon | Spallas, J.P.
Das, J.H.
MacDonald, N.C. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 437-40 |
| 279 | Nanotips and transmission low energy electron diffraction | Spence, J.C.H. | NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) <u>235</u> , 19-33 |
| 280 | Field-emitter-array development for high-frequency operation | Spindt, C.A.
Holland, C.E.
Rosengreen, | J. Vac. Sci. Technol. B (1993) <u>11</u> , 464-67 |
| 281 | Miniaturized electron microscope | Staufer, U.
Murray, L.P.
Kern, D.P.
Change, T.H.P. | NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) <u>235</u> , 101-10 |
| 282 | Field emission microscope investigation of oxide formation on molybdenum field emitters | Stepien, Z.M. | Czech. J. Phys. (1993) <u>43</u> , 1029-33 |
| 283 | Cluster ion formation in isothermal ramped field-desorption of amorphous water ice from metal surfaces | Stintz, A.
Panitz, J.A. | Surf. Sci. (1993) <u>296</u> , 75-86 |
| 284 | Enhanced local electric fields in field ionization at steps of clean and Au covered Rh(111) | Suchorski, Y.
Schmidt, W.A.
Block, J.H. | Appl. Surf. Sci. (1993) <u>67</u> , 124-27 |
| 285 | Field electron emission from transition metals with d-type unsaturated electronic surface states | Suchorski, Y.
Schmidt, W.A.
Block, J.H.
Medvedev, V.K. | Surf. Sci. (1993) <u>293</u> , L853-56 |
| 286 | Environmental embrittlement and grain boundary segregation of boron in Ni ₃ (Si,Ti) and Co ₃ Ti alloys | Takasugi, T.
Hono, K.
Suzuki, S.
Hanada, S.
Sakurai, T. | Scr. Metall. Mater. (1993) <u>29</u> , 1587 |
| 287 | Micromachining of a high-temperature superconductor for field ion microscopy | Talentsev, E.F.
Ivchenko, V.A.
Syutkin, N.N. | J. Micromech. Microeng. (1993) <u>3</u> , 87-89 |
| 288 | Temperature of the superconductor-normal state phase transition of a field-emission cathode | Talentsev, E.F.
Ivchenko, V.A.
Syutkin, N.N. | Zh. Tekh. Fiz. (1993) <u>63</u> , 199-203 |

- | | | | |
|-----|---|--|--|
| 289 | A field ion microscope study on the surface reaction of tungsten with n-octanol under an applied positive voltage: reaction conditions for the "splitting of" (110) plane | Terao, T.
Iwatsu, F.
Morikawa, H. | Scr. Metall. Mater. (1993) <u>28</u> , 1549-54 |
| 290 | Field ion microscope observation of metal-liquid surface reaction. The reaction of tungsten with alcohol | Terao, T.
Morikawa, H.
Iwatsu, F. | Nippon Kinzoku Gakkai Kaiho (1993) <u>32</u> , 601-8 |
| 291 | Magnetic microlens with an atomically sharp field emitter | Terris, B.D.
Zuger, O.
Rugar, D. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 2315-18 |
| 292 | Atom probe and STEM studies of carbide precipitation in 2 1/4 Cr1Mo steel | Thomson, R.C.
Bhadeshia, H.K.D.H. | Appl. Surf. Sci. (1993) <u>67</u> , 334-41 |
| 293 | Single micromachined emitter characteristics | Tringides, M.C.
Seymour, P.
Jacobs, K.
Busta, H.H.
Pogemiller, J.D. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 396-99 |
| 294 | Flat display based on the metal-insulator-metal emitter array | Troyan, P.E.
Lubsanov, R.B.
Vorobyev, G.A.
Ghyngazov, S.A.
Lakstroem, I.V.
Kramor, S.S. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 514-17 |
| 295 | Fabrication of gated silicon field-emission cathodes for vacuum microelectronics and electron-beam applications | Trujillo, J.T.
Hunt, C.E. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 454-58 |
| 296 | Mechanisms and energetics of surface atomic processes, an atom-probe field ion microscope study | Tsong, T.T. | Atomic Scale Imaging of Surfaces and Interfaces (Proc. Materials Research Society Fall '92 Meeting), D.K. Biegelsen, D.J. Smith, and S.Y. Tong, eds., Materials Research Society, Pittsburgh, PA (1993) <u>295</u> , 49-58 |
| 297 | Studies of atomic processes useful for atomic manipulation with STM | Tsong, T.T. | Mater. Chem. and Phys. (1993) <u>33</u> , 1-14 |
| 298 | Mechanisms and energetics of surface atomic processes, an atom-probe field ion microscope study | Tsong, T.T. | Mater. Res. Soc. Symp. Proc. (1993) <u>280</u> , 87-96 |
| 299 | Atom-probe field ion microscopy | Tsong, T.T. | Phys. Today (1993) <u>46</u> , 24-31 |
| 300 | Atom-probe field ion microscopy and applications to surface science | Tsong, T.T. | Surf. Sci. (1993) <u>299/300</u> , 153-69 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|--|---|--|
| 301 | Theory of desorption from a negatively biased surface | Tsukada, M.
Sawamura, M. | Surf. Sci. (1993) <u>283</u> , 182-88 |
| 302 | Site-specific measurement of adatom binding energy differences by atom extraction with the STM | Uchida, H.
Huang, D.
Grey, F.
Aono, M. | Phys. Rev. Lett. (1993) <u>70</u> , 2040-43 |
| 303 | Single-atom manipulation on the Si(111)7 × 7 surface by the scanning tunneling microscope (STM) | Uchida, H.
Huang, D.H.
Yoshinobu, J.
Aono, M. | Surf. Sci. (1993) <u>287/288</u> , 1056-61 |
| 304 | Manufacture of field-emission electron source | Urayama, M.
Ise, T.
Maruo, J.
Akagi, Y. | Jpn. Kokai Tokkyo Koho (Patent) JP 05094762 (1993) |
| 305 | Silicon field emitter capable of low voltage emission | Urayama, M.
Ise, T.
Maruo, Y.
Kishi, A.
Imamoto, R.
Takase, T. | Jpn. J. Appl. Phys. (1993) <u>32</u> , 6293-96 |
| 306 | The adsorption and dissociation of CO ₂ on Rh | van Tol, M.F.H.
Gielbert, A.
Nieuwenhuys, B.E. | Appl. Surf. Sci. (1993) <u>67</u> , 166-78 |
| 307 | Oscillatory behaviour of the reduction of NO by H ₂ and NH ₃ over Rh studied by FEM | van Tol, M.F.H.
Gielbert, A.
Nieuwenhuys, B.E. | Appl. Surf. Sci. (1993) <u>67</u> , 179-87 |
| 308 | The striking difference in the behaviour of Rh and Pt towards their interaction with CO ₂ | van Tol, M.F.H.
Gielbert, A.
Wolf, R.M.
Lie, A.B.K.
Nieuwenhuys, B.E. | Surf. Sci. (1993) <u>287/288</u> , 201-7 |
| 309 | The adsorption and dissociation of NO on Rh(100) and stepped Rh surfaces | van Tol, M.F.H.
Nieuwenhuys, B.E. | Appl. Surf. Sci. (1993) <u>67</u> , 188-97 |
| 310 | Roughening transitions in the vicinal areas of Ta{110} and Ta{100} observed during vapour growth on clean, thermally rounded Ta crystallites | Vanselow, R.
Li, X.Q.D. | Surf. Sci. Letts. (1993) <u>281</u> , L326-30 |
| 311 | Oxygen-induced reconstruction of Rh {110} and {113} single crystal planes | Voss, C.
Gaussmann, A.
Kruse, N. | Appl. Surf. Sci. (1993) <u>67</u> , 142-46 |
| 312 | Microstructural influence on uniform corrosion of Zircaloy nuclear fuel claddings | Wadman, B.
Andrén, H.-O.
Nyström, A.-L.
Rudling, P.
Pettersson, H. | J. Nucl. Mater. (1993) <u>200</u> , 207-17 |

- | | | | |
|-----|--|---|---|
| 313 | Design considerations of silicon avalanche cathodes | Wang, M.
Lu, Y.
Lalevic, B. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 426-28 |
| 314 | Electric field effects in the formation of NCO on Ru(001) with co-adsorbed oxygen | Wang, R.L.C.
Kreuzer, H.J. | Chem. Phys. (1993) <u>177</u> , 453-59 |
| 315 | Atom condensation at lattice steps and clusters | Wang, S.C.
Ehrlich, G. | Phys. Rev. Lett. (1993) <u>71</u> , 4174-77 |
| 316 | Real-time observation of the vibration of a single adsorbed molecule | Watanabe, F.
McClelland, G.M.
Heinzelmann, H. | Science (1993) <u>262</u> , 1244-47 |
| 317 | Surface processes in high electric fields | Watanabe, K. | Hyomen Kagaku (1993) <u>14</u> , 48-52 |
| 318 | First principles molecular dynamics study on the electronic structures of Si(100) surface in electric fields | Watanabe, K.
Satoh, T.
Watanabe, K. | Appl. Surf. Sci. (1993) <u>67</u> , 13-16 |
| 319 | Rhenium tips for stable scanning tunneling microscopy | Watanabe, M.O.
Kinno, T. | Jpn. J. Appl. Phys. (1993) <u>32</u> , Pt. 2, No. 9, L1266-68 |
| 320 | Manufacturable vacuum field emission diodes | Weichold, M.H.
Legg, J.D.
Mason, M.E.
James, T.C. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 505-10 |
| 321 | Observation of Fowler-Nordheim tunnelling at atmospheric pressure using Au/Ti lateral tunnel diodes | Wong, T.K.S.
Ingram, S.G. | J. Phys. D: Appl. Phys. (1993) <u>26</u> , 979-85 |
| 322 | Electron optical properties and aberrations of field emission microsources | Ximen, J.
Ximen, H.
Zhou, L. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 275-80 |
| 323 | On the energy dissipation in field emission and tunneling microscopy | Xu, J.
Moeller, R.
Laeuger, K.
Dransfeld, K.
Williams, C.C. | NATO ASI Ser., Ser. E (Nanosources and Manipulation of Atoms Under High Fields and Temperatures: Applications), V.T. Binh, N. Garcia, and K. Dransfeld, eds. (1993) <u>235</u> , 89-100 |
| 324 | Field-dependence of the area-density of 'cold' electron emission sites on broad-area CVD diamond films | Xu, N.S.
Latham, R.V.
Tzeng, Y. | Elect. Letts. (1993) <u>29</u> , 1596-97 |
| 325 | Similarities in the 'cold' electron emission characteristics of diamond coated molybdenum electrodes and polished bulk graphite surfaces | Xu, N.S.
Tzeng, Y.
Latham, R.V. | J. Phys. D: Appl. Phys. (1993) <u>26</u> , 1766-80 |

1993 BIBLIOGRAPHY

- | | | | |
|-----|---|--|--|
| 326 | Theory of field adsorption of hydrogen | Ye, X.
Kreuzer, H.J.
Salahub, D.R. | Appl. Surf. Sci. (1993) <u>67</u> , 1-8 |
| 327 | Theory of field adsorption of hydrogen | Ye, X.
Kreuzer, H.J.
Salahub, D.R. | Report, TR-9; Order No. AD-A257139, 23 pp. Avail. NTIS from: Govt. Rep. Announce. Index (U.S.) (1993) <u>93</u> , Abstr. No. 306,139 |
| 328 | Emission characteristics of metal-oxide-semiconductor electron tunneling cathode | Yokoo, K.
Tanaka, H.
Sato, S.
Murota, J.
Oho, S. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 429-32 |
| 329 | Evaluation of mechanical properties of stainless steels after simulated service conditions. 2. Detection of microstructures of aged stainless steels using atom probe | Yoshimura, T.
Ishikawa, Y.
Enomoto, K.
Sakata, S. | Nippon Kikai Gakkai Ronbunshu, A-hen (1993) <u>59</u> , 2034-40 |
| 330 | Simulation of field emission microtriodes | Zaidman, E.G. | IEEE Trans. Electron Devices (1993) <u>40</u> , 1009-16 |
| 331 | Integrated silicon process for microdynamic vacuum field emission cathodes | Zhang, Z.L.
MacDonald, N.C. | J. Vac. Sci. Technol. B (1993) <u>11</u> , 2538-43 |
| 332 | Temperature and surface states of point field emitters during the observation of rings on the emission images | Zhukov, V.M.
Egorov, N.V.
Prudnikov, A.P. | Poverkhnost (1993) <u>6</u> , 33-37 |

ADDENDUM

- | | | | |
|----|---|---|--|
| 1 | Monolayer graphite on transition-metal carbides and application to field emitter | Aizawa, T.
Ishizawa, Y. | Tanso (1992) <u>155</u> , 335-46 |
| 2 | Planar field emission devices with three-dimensional gate structures | Araragi, M.
Nureki, C. | J. Micromech. Microeng. (1992) <u>2</u> , 5-9 |
| 3 | Review: Vacuum microelectronics - 1992 | Busta, H.H. | J. Micromech. Microeng. (1992) <u>2</u> , 43-74 |
| 4 | Organic field emission device | Ekusa, T. | Jpn. Kokai Tokkyo Koho (Patent) JP 04352482 (1992) |
| 5 | Field electron emission from large-area yttrium barium copper oxide ($\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$) superconducting films in vacuum | Elizondo, J.M. | 15th Int. Symp. Discharges Electr. Insul. Vac., D. Koenig, ed., VDE-Verlag: Berlin, Germany (1992) 59-62 |
| 6 | Atomic resolution study of solute-atom segregation at grain boundaries: experiments and Monte Carlo simulations | Foiles, S.M.
Seidman, D.N. | Material Interfaces, D. Wolf and S. Yip, eds., Chapman & Hall: London, UK (1992) 497-515 |
| 7 | Oxygen-induced buildup of W(100) and W(111) planes | Gong, Y.M. | Solid State Commun. (1992) <u>84</u> , 1085-88 |
| 8 | Probe-hole field-emission microscope system controlled by computer | Gong, Y.M.
Zeng, H.S. | Chin. Phys. L (1991) <u>8</u> , 446-9 |
| 9 | Material transfer between metallic tips and surface in the STM | Guo, C.
Foiles, S.M.
Seidman, D.N.
Thomson, D.J. | Ultramicroscopy (1992) <u>42-44</u> , 1452-58 |
| 10 | Vacuum microelectronics: application perspectives for future display technology | Herman, M.A. | Opto-Electron. Rev. (1992) <u>1</u> , 30-34 |
| 11 | Ungated vacuum field emission from ordered arrays of microlithographically defined cylinders | Hickman, J.J.
Georger, J.H.
Anderson, M.
Bergeron, G.L.
Kirkpatrick, D.A. | Mater. Res. Soc. Symp. Proc. (1992) <u>260</u> , 423-28 |
| 12 | Nano-scale analysis by atom probe FIM (in Japanese) | Hono, K. | Boundary (1992) <u>8</u> , 18-25 |
| 13 | The microstructure evolution of $\text{Fe}_{73.5}\text{Si}_{3.5}\text{B}_9\text{Nb}_3\text{Cu}_1$ nanocrystalline soft magnetic material | Hono, K.
Hiraga, K.
Wang, Q.
Inoue, A.
Sakurai, T. | Acta Metall. Mater. (1992) <u>40</u> , 2137-47 |
| 14 | Direct evidence for compositional fluctuation in sputtered Co-Cr thin films | Hono, K.
Maeda, Y.
Li, J-D.
Sakurai, T. | J. Magn. Magn. Mater. Lett. (1992) <u>110</u> , L254-58 |

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| 15 | Nano-scale characterization of alloys by atom probe field ion microscopy | Hono, K.
Sakurai, T. | Nippon Kinzoku Gakkai Kaiho (1992) <u>31</u> , 900-903 |
| 16 | Field emission cathode | Kobori, Y.
Tanaka, M. | U.S. Patent No. 5162704 (1992) |
| 17 | Field-emission devices | Komatsu, H. | Jpn. Kokai Tokkyo Koho (Patent) JP 04332424 (1992) |
| 18 | A study of silicon avalanche cold microcathode using ultra-shallow pn+ junction | Li, Q.
Tang, S.
Yaun, M.
Xue, Z.
Xu, J.
Lin, C.
Zhang, D.
Wu, J. | Zhenkong Kexue Yu Jishu (1992) <u>12</u> , 239-42 |
| 19 | Electronic structures of supported nanometer-size clusters using field emission energy analyzer | Lin, M.E. | 204 pp. Avail. Univ. Microfilms, Int., Order No. DA9215598, Diss. Abstr. Int. B (1992) <u>53</u> , 366 |
| 20 | Fabrication of self-aligned gated field emitters | Liu, D.
Ravi, T.S.
Bagley, B.G.
Chin, K.K.
Marcus, R.B. | J. Micromech. Microeng. (1992) <u>2</u> , 21-24 |
| 21 | Enhanced field emission of niobium single crystals | Mahner, E.
Heiderhoff, R.
Minatti, N.
Piel, H. | Proc. 3rd Eur. Part. Accel. Conf. H. Heinke, H. Homeyer, and C. Petit-Jean-Genaz, eds., Frontieres: Gif-sur-Yvette, France (1992) <u>2</u> , 1653-55 |
| 22 | Dynamic field emission: stability criteria of microscopic field emission sites | Mitterauer, J.
Till, P. | 15th Int. Symp. Discharges Electr. Insul. Vac., D. Koenig, ed., (1992) 93-97, VDE-Verlag: Berlin, Germany |
| 23 | Application of position-sensitive atom probe in field ion microscopy | Sha, W. | Cailiao Kexue Yu Gongcheng (1992) <u>10</u> , 35-36 |
| 24 | Some new microscopic observation techniques and their applications to material research | Shiraga, N.
Minobe, M. | Sumitomo Kagaku (Osaka) (1992) <u>2</u> , 54-67 |
| 25 | Switching over of high-T _c superconducting thin films from superconducting to the normal state by field electron emission current | Shkuratov, S.I.
Shilimanov, S.N. | 15th Int. Symp. Discharges Electr. Insul. Vac., D. Koenig, ed., (1992) 132-4, VDE-Verlag: Berlin, Germany |
| 26 | A field ion microscope and atom-probe study of surface atomic processes | Tsong, T.T. | China Cent. Adv. Sci. Technol. (World Lab.) Symp./Workshop Proc. (1992) <u>2</u> , 75-88 |

ADDENDUM

- | | | | |
|----|--|---|--|
| 27 | A study of thermal roughening of clean Pt110 and its vicinal areas by field electron emission microscope (FEM) | Vanselow, R. | Surf. Sci. (1992) <u>279</u> , L213-18 |
| 28 | Electron emitter | Watanabe, N. | Jpn. Kokai Tokkyo Koho Patent, JP 04274123 (1992) |
| 29 | Direct observations of interfaces in materials | Ye, H.
Li, D.
Ren, D.
Ning, X.
He, A.
He, L. | Prog. Nat. Sci. (1992) <u>2</u> , 289-302 |
| 30 | Microchemical analysis of intermetallic alloys using the field-ion microscope atom probe | Brenner, S.S. | Report, DOE/ER/45213-T2; Order No. DE92004020, 7 pp. Avail. NTIS from: Energy Res. Abstr. 1992, 17(3), Abstr. No. 6905 (1991) |
| 31 | Interface studies of high-Tc superconductors by field-ion and field-electron energy spectroscopy | Ernst, N.
Schmidt, W.A.
Bozdech, G.
Naschitzki, M.
Melmed, A.J. | High-Temp. Supercond. Proc. ICMC '90 Top.-Conf. Mater. Aspects High-Temp. Supercond., H.C. Freyhardt, R. Flueckiger, and M. Peuckert, eds., DGM Informationsges: Oberursel, Germany (1991) <u>2</u> , 859-64 |
| 32 | <310> Single-crystal LaB ₆ as thermal field emitter of high brightness electron source | Harada, K.
Nagata, H.
Shimizu, R. | J. Elect. Microsc. (1991) <u>40</u> , 1-4 |
| 33 | Field ion microscopy (in Japanese) | Hono, K.
Sakurai, T. | J. Jpn. Soc. Precis. Eng. (1991) <u>57</u> , 1145-50 |
| 34 | Structure and compositional analysis with atomic scale resolution by atom probe FIM (in Japanese) | Hono, K.
Sakurai, T. | New Materials (Shinsozai) (1991) <u>3</u> , 82-87 |
| 35 | Field emission studies of heat treated and chemically treated superconducting cavities | Padamsee, H.
Barnes, P.
Kirchgessner, J.
Moffat, D.
Rubin, D.
Sears, J.
Shu, Q.S. | Conf. Rec. IEEE Part. Accel. Conf., 14th, Vol. 4, 2420-2 (1991) IEEE: New York, NY |
| 36 | Equilibrium and steady-state forms of heated metallic crystals in a strong electric field | Vlasov, Y.A.
Golubev, O.L.
Shrednik, V.N. | Rost Krist. (1991) <u>19</u> , 5-21 |
| 37 | Wentzel-Kramers-Brillouin method in multidimensional tunneling | Huang, Z.H.
Feuchtwang, T.E.
Cutler, P.H.
Kazes, E. | Phys. Rev. A (1990) <u>41</u> , 32-41 |

ADDENDUM

- | | | | |
|----|--|--------------------------------------|--|
| 38 | Theory of a single-atom point source for electrons | Lang, N.D.
Yacobs, A.
Imry, Y. | Phys. Rev. Lett. (1989) <u>63</u> ,
1499-1502 |
| 39 | The screening of an electric field at an Al(001) surface | Inglesfield, J.E. | Surf. Sci. (1987) <u>188</u> , L701-7 |

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