

Laboratory: Irradiation Effects in Nuclear and Their Related Materials 2000-2004

著者	Institute for Materials Research, Tohoku University
journal or publication title	List of Publications 2000-2004
URL	http://hdl.handle.net/10097/56474

Kuwabara, T; Kurishita, H; Hasegawa, M

Microstructure control to improve mechanical properties of vanadium alloys for fusion applications

J. Nucl. Mater. 283 (2000) 611 – 615

00-IMR0262

Hasegawa, M; Saneyasu, M; Tabata, M; Tang, Z; Nagai, Y; Chiba, T; Ito, Y

Positron and positronium studies of irradiation-induced defects and microvoids in vitreous metamict silica

Nucl. Instrum. Methods Phys. Res. 166 (2000) 431 – 439

Sect. B-Beam Interact. Mater.

Atoms

00-IMR0263

Kurihara, T; Yagishita, A; Enomoto, A; Kobayashi, H; Shidara, T; Shirakawa, A; Nakahara, K; Saitou, H; Inoue, K; Nagashima, Y; Hyodo, T; Nagai, Y; Hasegawa, M; Inoue, Y; Kogure, Y; Doyama, M

Intense positron beam at KEK

Nucl. Instrum. Methods Phys. Res. 171 (2000) 164 – 171

Sect. B-Beam Interact. Mater.

Atoms

00-IMR0264

Nagai, Y; Hasegawa, M; Tang, Z; Hempel, A; Yubuta, K; Shimamura, T; Kawazoe, Y; Kawai, A; Kano, F

Positron confinement in ultrafine embedded particles: Quantum-dot-like state in an Fe-Cu alloy

Phys. Rev. B 61 (2000) 6574 – 6578

00-IMR0253

Nagai, Y; Tang, Z; Hasegawa, M

Chemical analysis of precipitates in metallic alloys using coincidence Doppler broadening of positron annihilation radiation

Radiat. Phys. Chem. 58 (2000) 737 – 742

00-IMR0265

- Nagai, Y; Murayama, M; Tang, Z; Nonaka, T; Hono, K; Hasegawa, M
Role of vacancy-solute complex in the initial rapid age hardening in an Al-Cu-Mg alloy
Acta Mater. 49 (2001) 913 – 920
01-IMR0252
-
- Anwand, W; Brauer, G; Hasegawa, M; Dersch, O; Rauch, F
A study of positron properties in quartz crystals and synthetic silica glass
Acta Phys. Pol. A 99 (2001) 321 – 328
01-IMR0253
-
- Hasegawa, M; Tang, Z; Nagai, Y; Shimamura, T; Nakazuru, K; Chiba, T; Saito, M
Magic-number vacancy clusters in graphite and silicon
Mater. Sci. Forum 363-3 (2001) 132 – 134
01-IMR0254
-
- Riewcharoon, T; Tang, Z; Nagai, Y; Hasegawa, M
Positron annihilation study of microvoids in neutron-irradiated vanadium: Effects of oxygen impurities
Mater. Sci. Forum 363-3 (2001) 167 – 169
01-IMR0255
-
- Tang, Z; Nonaka, T; Nagai, Y; Hasegawa, M
Identification of vacancy-oxygen complexes in Si by coincidence Doppler broadening of positron annihilation radiation and first-principles calculations
Mater. Sci. Forum 363-3 (2001) 67 – 69
01-IMR0256
-
- Nagai, Y; Hasegawa, M; Tang, Z; Kanai, T; Saneyasu, M
Study of ultrafine Cu precipitates in neutron-irradiated Fe utilizing positron quantum-dot-like states
Mater. Sci. Forum 363-3 (2001) 91 – 93
01-IMR0257
-
- Wang, CL; Kobayashi, Y; Zheng, W; Zhang, C; Nagai, Y; Hasegawa, M
Positronium formation in a polymer blend of polyethylene and chlorinated polyethylene
Phys. Rev. B 63 (2001) Art. No. 064204 –
01-IMR0258
-
- Nagai, Y; Tang, Z; Hasegawa, M; Kanai, T; Saneyasu, M
Irradiation-induced Cu aggregations in Fe: An origin of embrittlement of reactor pressure vessel steels
Phys. Rev. B 63 (2001) Art. No.134110 –
01-IMR0259
-
- Nagai, Y; Chiba, T; Tang, Z; Akahane, T; Kanai, T; Hasegawa, M; Takenaka, M; Kuramoto, E
Fermi surface of nanocrystalline embedded particles in materials: bcc Cu in Fe
Phys. Rev. Lett. 87 (2001) Art. No. 176402 –
01-IMR0260
-

Hasegawa, M; Tang, Z; Nagai, Y; Nonaka, T; Nakamura, K

Positron lifetime and coincidence Doppler broadening study of vacancy-oxygen complexes in Si: experiments and first-principles calculations

Appl. Surf. Sci. 194 (2002) 76 – 83

02-IMR0269

Ishijima, Y; Kakiuchi, K; Furuya, T; Kurishita, H; Hasegawa, M; Igarashi, T; Kawai, M

Corrosion resistance of refractory metals in high-temperature water

J. Nucl. Mater. 307 (2002) 1369 – 1374

02-IMR0270

Nogiwa, K; Yamamoto, T; Fukumoto, K; Matsui, H; Nagai, Y; Yubuta, K; Hasegawa, M

In situ TEM observation of dislocation movement through the ultrafine obstacles in an Fe alloy

J. Nucl. Mater. 307 (2002) 946 – 950

02-IMR0271

Nagai, Y; Honma, T; Tang, Z; Hono, K; Hasegawa, M

Coincidence Doppler broadening study of the pre-precipitation stage of an Al-Cu-Mg-Ag alloy

Philos. Mag. A-Phys. Condens. Matter Struct. Defect Mech. Prop. 82 (2002) 1559 – 1572

02-IMR0272

Onitsuka, T; Takenaka, M; Kuramoto, E; Nagai, Y; Hasegawa, M

Deformation-enhanced Cu precipitation in Fe-Cu alloy studied by positron annihilation spectroscopy

Phys. Rev. B 65 (2002) Art. No. 012204 –

02-IMR0273

Tang, Z; Hasegawa, M; Nagai, Y; Saito, M; Kawazoe, Y

First-principles calculation of coincidence Doppler broadening of positron annihilation radiation

Phys. Rev. B 65 (2002) Art. No. 045108 –

02-IMR0249

Tang, Z; Hasegawa, M; Nagai, Y; Saito, M

Density functional study on metastable bcc copper: Electronic structure and momentum density of positron-electron pairs

Phys. Rev. B 65 (2002) Art. No. 195108 –

02-IMR0274

Ohkubo, H; Tang, Z; Nagai, Y; Hasegawa, M; Tawara, T; Kiritani, M

Positron annihilation study of vacancy-type defects in high-speed deformed Ni, Cu and Fe

Mater. Sci. Eng. A-Struct. Mater. 350 (2003) 95 – 101
Prop. Microstruct. Process.

03-IMR0287

Nagai, Y; Takadate, K; Tang, Z; Ohkubo, H; Sunaga, H; Takizawa, H; Hasegawa, M

Positron annihilation study of vacancy-solute complex evolution in Fe-based alloys

Phys. Rev. B 67 (2003) Art. No. 224202 –

03-IMR0288

Nagai, Y; Inoue, K; Tang, Z; Yonenaga, I; Chiba, T; Saito, M; Hasegawa, M

Jahn-Teller distortion of neutral divacancy in Si studied by positron annihilation spectroscopy

Physica B 340 (2003) 518 – 522

03-IMR0222

Nagai, Y; Tang, Z; Ohkubo, H; Takadate, K; Hasegawa, M

Elemental analysis of positron affinitive site in materials by coincidence Doppler broadening spectroscopy

Radiat. Phys. Chem. 68 (2003) 381 – 386

03-IMR0289

Sasaki, Y; Nagai, Y; Ohkubo, H; Inoue, K; Tang, Z; Hasegawa, M

Positronium in silica-based glasses

Radiat. Phys. Chem. 68 (2003) 569 – 572

03-IMR0290

- Honma, T; Yanagita, S; Hono, K; Nagai, Y; Hasegawa, A
Coincidence Doppler broadening and 3DAP study of the pre-precipitation stage of an Al-Li-Cu-Mg-Ag alloy 1016/j.actamat.2003.1
Acta Mater. 52 (2004) 1997 – 2003
04-IMR0229
-
- Ishijima, Y; Kurishita, H; Yubuta, K; Arakawa, H; Hasegawa, M; Hiraoka, Y; Takida, T; Takebe, K
Current status of ductile tungsten alloy development by mechanical alloying
J. Nucl. Mater. 329-33 (2004) 775 – 779
04-IMR0230
-
- Nagai, Y; Toyama, T; Tang, Z; Hasegawa, M; Yanagita, S; Ohkubo, T; Hono, K
Embedded ultrafine clusters investigated by coincidence Doppler broadening spectroscopy
Mater. Sci. Forum 445-4 (2004) 11 – 15
04-IMR0231
-
- Nadesalingam, MP; Kim, S; Fazleev, NG; Fry, JL; Nagai, Y; Hasegawa, M; Weiss, AH
Search for positron trapping at quantum-dot like Cu nano particles on the surface of Fe using positron annihilation induced auger electron spectroscopy (PAES)
Mater. Sci. Forum 445-4 (2004) 156 – 158
04-IMR0232
-
- Ohkubo, H; Nagai, Y; Inoue, K; Tang, Z; Hasegawa, M
Vacancy-solute binding energies in aluminum by positron annihilation
Mater. Sci. Forum 445-4 (2004) 165 – 167
04-IMR0233
-
- Onitsuka, T; Takenaka, M; Abe, H; Kuramoto, E; Ohkubo, H; Nagai, Y; Hasegawa, M
Irradiation-enhanced Cu-precipitation in Fe-Cu alloys studied by positron annihilation spectroscopy and electrical resistivity measurement
Mater. Sci. Forum 445-4 (2004) 168 – 170
04-IMR0234
-
- Toyama, T; Nagai, Y; Tang, Z; Hasegawa, M; Ohkubo, T; Hono, K
Irradiation-induced defects and Cu precipitates in ternary Fe-based model alloys for nuclear reactor pressure vessel steels studied by positron annihilation and 3D atom probe
Mater. Sci. Forum 445-4 (2004) 195 – 197
04-IMR0235
-
- Eldrup, M; Singh, BN; Edwards, DJ; Nagai, Y; Ohkubo, H; Hasegawa, M
Neutron irradiated copper: Is the main positron lifetime component due to stacking fault tetrahedra?
Mater. Sci. Forum 445-4 (2004) 21 – 25
04-IMR0236
-
- Inoue, K; Nagai, Y; Sasaki, Y; Tang, Z; Ohkubo, H; Hasegawa, M
Structural subnanovoids in silica-based glasses probed by positronium
Mater. Sci. Forum 445-4 (2004) 304 – 306
04-IMR0237

Chiba, T; Nagai, Y; Tang, Z; Akahane, T; Hasegawa, M; Takenaka, M; Kuramoto, E

Electronic structure of nanosized bcc Cu precipitates in Fe-Cu alloys studied by positron 2D-ACAR

Mater. Sci. Forum 445-4 (2004) 380 – 384

04-IMR0238

Tang, Z; Hasegawa, M; Nagai, Y; Saito, M

First-principles calculation of positron annihilation characteristics in solids: From positron to positronium

Mater. Sci. Forum 445-4 (2004) 390 – 394

04-IMR0239
