

Cambridge University Press

978-1-107-41355-9 - Materials Research Society Symposium Proceedings: Volume 500:  
Electrically Based Microstructural Characterization II

Editors: Rosario A. Gerhardt, Mohammad A. Alim and S. Ray Taylor

Index

[More information](#)

## AUTHOR INDEX

- Agrawal, V., 21  
 Alford, Neil McN., 183, 189  
 Aliev, F.M., 151  
 Alim, M.A., 253  
 Arai, Toshiaki, 119  
 Arisumi, Osamu, 69  
  
 Barbolla, J., 87  
 Bartkowiak, M., 221, 253  
 Basceri, C., 101  
 Batalla, B., 151  
 Benoit, J., 315  
 Bork, T., 21  
  
 Cardoso, A. Romanelli, 93, 97  
 Castán, E., 87  
 Chan, Siu-Wai, 279  
 Chen, Pu-Woei, 303  
 Chin, T.P., 63  
 Chiteme, C., 357  
 Choi, Gyeong Man, 327, 347  
 Choma, Ron, 75  
 Christen, T., 235  
 Chung, D.D.L., 43, 303  
 Cocivera, M., 57  
 Comber, M.G., 253  
  
 Desmedt, S., 157  
 Dimiduk, D.M., 49  
 Dong, Ming, 195  
 Du, Y., 29  
 Dueñas, S., 87  
 Duggal, Anil R., 247  
  
 Engel, C., 285  
  
 Filhol, P., 189  
 Franke, R., 285  
 Friederich, Paul, 335  
 Fu, Xuli, 43, 303  
 Fujimoto, H., 125  
  
 Gallop, J.C., 189  
 Garboczi, Edward J., 291  
 García, K.L., 133  
 Gerhardt, Rosario A., 195, 341  
 Glatz-Reichenbach, J., 235  
 Gonzalez-Diaz, G., 87  
 Gopal, V., 63  
 Grabtchak, S., 57  
 Greuter, F., 235  
 Gutiérrez, P., 147  
  
 Hahn, H., 273  
 Haluschka, C., 285  
 Han, Dae Gon, 347  
 Hartford, Catherine, 75  
 Hazzledine, P.M., 49  
  
 Hirose, M., 81  
 Hopkins, Edward, 335  
 Hruskovic, M., 3  
 Huanosta, A., 147  
  
 Ignat, M., 125  
 Iiyori, Hideo, 119  
  
 Jonscher, Andrew K., 167  
  
 Karpov, Ilya, 75  
 Kingon, A.I., 101  
 Kleebe, H.-J., 285  
 Klein, K.A., 137  
 Klein, N., 189  
 Kohno, A., 81  
 Kokan, Julie Runyan, 341  
 Krishnakumar, Subramania, 75  
 Kvam, E.P., 63  
  
 Lang, C.I., 15  
 Lányi, S., 3  
 Lapcik, Jr., L., 157  
 Lemaire, P.K., 315  
 Lesieutre, B.C., 29  
 Levinson, Lionel M., 247  
 Liedermann, K., 157  
 Linn, Jack, 75  
 Lust, Lisa, 335  
  
 Mahan, G.D., 253  
 Mamishev, A.V., 29  
 Marieb, T., 125  
 Mártil, I., 87  
 Martin, B.C., 101  
 Maruyama, T., 81  
 McLachlan, David S., 341, 351, 357  
 Mierisch, A.M., 35  
 Miyazaki, S., 81  
 Mizutani, F., 113  
 Modine, F.A., 203  
 Mondal, P., 273  
 Moore, Rick, 335  
 Moran, Greg, 75  
 Mukae, K., 213  
 Murakami, H., 81  
  
 Neuzil, P., 21  
 Nishiwaki, T., 113  
 Nishiyama, Akira, 69  
  
 Park, Y.M., 327  
 Peláez, R., 87  
 Peláiz, A., 147  
 Penn, Stuart J., 183, 189  
 Pereira da Silva, M.L., 93, 97  
 Porat, O., 321

Cambridge University Press

978-1-107-41355-9 - Materials Research Society Symposium Proceedings: Volume 500:  
Electrically Based Microstructural Characterization II

Editors: Rosario A. Gerhardt, Mohammad A. Alim and S. Ray Taylor

Index

[More information](#)Riedel, R., 285  
Ruh, Robert, 341Santamarina, J.C., 137  
Santiago-Aviles, J.J., 93, 97  
Sato, N., 113  
Sinha, G.P., 151  
Speel, R., 315  
Sprague, J.J., 321  
Streiffer, S.K., 101  
Sun, Y.Q., 49  
Sundaram, S.K., 309Takayama, Shinji, 107  
Takeuchi, S., 113  
Tamura, T., 81  
Tanaka, A., 213  
Tapson, J., 15  
Taylor, S.R., 35  
Templeton, Alan, 183, 189Tian, Chunyan, 279  
Tuller, H.L., 321

Ue, M., 113

Valenzuela, R., 133, 147  
van der Weide, D.W., 21  
Vasiliev, A.L., 63  
Voiron, F., 125Wang, J.C., 261  
Wang, Xiaojun, 43  
Wang, Xiaoru, 183, 189  
Woodall, J.M., 63  
Wu, Jungie, 351

Yoshimi, Makoto, 69

Zahn, M., 29  
Zuccaro, C., 189

Cambridge University Press

978-1-107-41355-9 - Materials Research Society Symposium Proceedings: Volume 500:  
Electrically Based Microstructural Characterization II

Editors: Rosario A. Gerhardt, Mohammad A. Alim and S. Ray Taylor

Index

[More information](#)

## SUBJECT INDEX

- Al-Sc alloy films, 107  
Al-Tb films, 107  
aluminum, 119  
amorphous, 285  
    ferromagnetic wires, 133  
AMTMP, 57  
anodic oxidation, 119  
anodized, 113
- bandgap, 69  
blocking electrodes, 195  
BN/B<sub>4</sub>C, 341  
bulk  
    grain boundary conductivity, 279  
    lattice conductivities, 279
- carbon fiber(s), 303  
    composites, 43  
carbonaceous contaminants, 97  
cavity perturbation, 57  
CdSe, 57  
cement, 303  
chemical diffusion, 315  
clusters, 347  
complex  
    AC conductivity, 351  
    dielectric permittivity, 29  
    impedance spectrum, 261  
composite(s), 327, 341, 347  
computer simulations, 291  
concrete, 303  
conductance transients, 87  
conductivities of the films, 279  
conductivity, 137, 357  
conductor(-)  
    filled polymer composites, 247  
    insulator, 351  
constant phase-angle, 261  
continuum percolation systems, 351  
contrast, 3  
corrosion, 309
- D.C. electrical transport, 315  
defect(s), 35  
    healing, 35  
    models, 321  
density of states, 81  
diagnostic tool, 167  
dielectric, 335  
    constant, 57, 93  
    loss, 183  
    losses, 3  
    properties, 195, 341  
    relaxation spectroscopy, 157  
    resonators, 189  
    spectroscopy, 151  
diffusion, 273
- disorder-induced gap-state, 87  
dispersion, 303  
doped, 183  
double-exponential distribution, 261
- ECR, 87  
electrical, 43  
    ceramics, 203  
    characterization, 63  
    conductivity, 327  
    measurements, 291  
    non-uniformity, 221, 253  
    properties, 93, 273  
    resistivity, 49, 303  
electrochemical, 309  
    reactions, 97  
electrode, 309  
electromagnetic, 137  
electronic conductivity, 315  
electronically based methods, 147  
energy absorption capability, 253  
epitaxial silicon layers, 75  
exponents, 357  
extrinsic losses, 189
- failure modes, 221, 253  
ferroelectric, 195  
floating-body effects, 69  
formation of dislocations, 49  
free space, 335  
frequency dependent measurements, 341
- gadolinium, 119  
gap state, 81  
gate insulator, 113  
Ge ion implantation, 69  
geometrical arrangement, 347  
giant magnetoimpedance, 135  
grain boundaries, 213  
growth, 125
- H-terminated Si surfaces, 81  
harmonic oscillator, 57  
heat(-)  
    transfer, 221, 253  
    treatment, 285  
high stresses, 49  
hillocks or whiskers, 107
- ICTS, 213  
impedance, 347  
    infrared imaging, 221  
    measurements, 125  
    spectroscopy, 133, 147, 273  
input stage, 3  
integrated films, 101  
interdigital dielectrometry, 29

Cambridge University Press

978-1-107-41355-9 - Materials Research Society Symposium Proceedings: Volume 500:  
Electrically Based Microstructural Characterization II

Editors: Rosario A. Gerhardt, Mohammad A. Alim and S. Ray Taylor

Index

[More information](#)

- interface, 43
  - states, 81, 213
  - structure, 63
- interfacial processes, 261
- intrinsic loss, 189
- ion conductor, 273
- ionic(-)
  - activity, 93
  - conductivity, 315
  - electronic, 327
- latex, 303
- leakage current, 113
- liquid crystal, 151
- local electrochemical impedance, 35
- localized
  - high-frequency electric, 21
  - spectroscopy, 21
- low-loss, 167
- magnetic
  - field probes, 21
  - permeability, 137
  - transitions, 147
- mapping, 35
- measurements, 137
- mechanical, 43
- metal-insulator-metal (MIM) capacitor, 101
- microcomposites, 137
- microstructural, 279
  - characterization, 63
- microstructure, 291, 327
- microwave, 335
  - communications, 189
  - photoconductivity, 57
- misfit dislocation, 63
- mixed
  - conduction, 321, 327
  - conductors, 315
  - ionic and electronic conduction, 321
- Mn-Zn ferrite, 147
- modified ion speed, 93
- moisture concentration, 29
- molecular mobility, 157
- molybdenum, 309
- multifunctional tips, 21
- nanocrystal, 273
- neodymium, 119
- nitrogen, 119
- nonaqueous electrolyte, 113
- non-blocking electrodes, 195
- non-debye, 261
- nonlinear
  - ceramics, 203
  - current flow, 235
- non-universal, 357
  - exponents, 351
- nucleation, 125
- 1/f noise, 357
- I-V characteristics measurements, 97
- organic coated, 35
- oxygen stoichiometry, 183
- PECVD (TEOS), 93
- percolation, 335, 357
  - systems, 351
- permittivity, 137
- photoelectron yield spectroscopy, 81
- plasticity, 49
- polycrystalline ceramics, 189
- polysaccharide, 157
- Poole-Frenkel, 101
- porosity, 183
- porous Si, 57
- potentiometry, 15
- PTCR, 247
- pyrochlore, 321
- Raman
  - scattering spectroscopy, 97
  - spectroscopy, 93
- reactive interfaces, 125
- removal of the ion flux, 93
- residual stress, 43
- resistivities of Al thin films, 107
- resistivity, 15
- resistometric mapping, 15
- resonant cavity, 335
- Sc or Tb, 107
- scaling behavior, 351
- scanning
  - capacitance microscopy, 3
  - force microscopes, 21
  - tunneling microscope, 15
- segregation of their metallic compounds, 107
- shape, 291
- Si GaAs, 57
- Si-C-N system, 285
- SiGe, 69
- silicon
  - dioxide, 93
  - nitride, 87
- SIMS, 75
- simulation, 347
- single crystal(s), 49, 189, 195
- SiO<sub>2</sub>/c-Si interfaces, 81
- slow traps, 87
- SOI MOSFETs, 69
- soils, 137
- solid oxide fuel cell, 321
- spectral shapes, 167
- spectroscopy, 35
- SRP, 75
- stabilized zirconia, 183
- stratified distributions, 29
- stray capacitance, 3
- structural inhomogeneities, 235
- switching, 247

Cambridge University Press

978-1-107-41355-9 - Materials Research Society Symposium Proceedings: Volume 500:  
Electrically Based Microstructural Characterization II

Editors: Rosario A. Gerhardt, Mohammad A. Alim and S. Ray Taylor

Index

[More information](#)

tantalum, 309  
Ta<sub>2</sub>O<sub>5</sub>, 101  
TEOS silicon dioxide, 97  
textured 0.58% Y<sub>2</sub>O<sub>3</sub> doped CeO<sub>2</sub> films, 279  
TFT(-), 119  
    LCD, 113  
thermal stresses, 253  
3-D composite materials, 235  
TiAl multilayer, 125  
time domain, 203  
topology, 291  
transformer pressboard, 29  
transmission line measurement, 335  
universal, 167, 357  
varistor(s), 213, 221, 235, 253  
very lossy, 167  
vitrification, 309  
ZnO, 213, 221, 253