

Table of Contents

Preface

Solute Drag and Entropy Production - Two Approaches to the Same Phenomenon M. Hillert	3
Texture and Microstructure of the Austenite in Multiphased Steel Sheets H. Réglé, N. Maruyama and N. Yoshinaga	11
Characteristics of the Deformed and Recrystallised Grains Obtained after Hot Plane Strain Compression of a Model Fe-30wt%Ni Alloy F. Bai, P. Cizek, E.J. Palmiere and W.M. Rainforth	21
Study of Deformation Microstructure and Static Recovery in Copper after Cold Drawing M. Benyoucef, S. Jakani, T. Baudin, M.H. Mathon and R. Penelle	27
Potentiality of Mean-Field Approaches for Recrystallisation: Characterization of the Deformed State of Polycrystals R. Brenner, O. Castelnau and B. Bacroix	33
Evaluation of Stored Energy in Cold-Rolled IF Steels from EBSD Data and Its Application to Recrystallization Modeling S.H. Choi and K.G. Chin	39
An Impingement – Spheroidisation Theory for Nucleation and Grain Growth B.J. Duggan, Y.Y. Tse and G.J. Shen	45
Estimation of Stored Energy Distribution from EBSD Measurements P. Gerber, T. Baudin, S. Jakani, M.H. Mathon and B. Bacroix	51
Relation between Activated Slip Systems and Nucleation of Recrystallized Grains in Deformed Single- and Bi-Crystals F. Inoko, K. Kashiara, M. Tagami and T. Okada	57
The Effect of Initial Grain Size on the Microstructures Developed during Cold Rolling of a Single-Phase Aluminium Alloy H. Jazaeri and J.F. Humphreys	63
Orientation Spread in Deformed Grains and Its Relevance to Recrystallization Texture Development in IF Steels J.Y. Kang, D.I. Kim, K.H. Oh and H.C. Lee	69
Investigation of Nucleation Mechanisms of Recrystallization in Warm Rolled Fe₃Al Base Alloys J. Konrad, S. Zaefferer and A. Schneider	75
In Situ Investigation of Bulk Nucleation by X-Ray Diffraction A.W. Larsen, C. Gundlach, H.F. Poulsen, L. Margulies, Q. Xing and D. Juul Jensen	81
A Statistical Mechanics Theory of Grain Deformation and Its Prediction of Dynamical Recovery and Recrystallization P.E.J. Rivera-Díaz-del-Castillo and S. van der Zwaag	87
Nucleation During Recrystallisation in Ti-SULC Steel N.C.A. Seaton and D.J. Prior	93
Orientation Aspects of the Recrystallization Nucleation in Highly Deformed Polycrystalline Copper K. Sztwiertnia	99
Nucleation in Recrystallization J.F. Humphreys	107
Inhomogeneous Deformation and Microstructural Evolution during the Hot Deformation of Al-4.98%Mg M.J. Ashton and J.F. Humphreys	117
Study of Local Microstructure and Texture Heterogeneities in Hot Rolled CGO Fe-3%Si Sheets F. Cruz-Gandarilla, T. Baudin, R. Penelle and H. Mendoza León	123
Investigation of the Primary Recrystallisation Microstructure of Cold Rolled and Annealed Fe 3% Si Single Crystals with Goss Orientation D. Dorner, L. Lahn and S. Zaefferer	129
Recrystallization Mechanisms in Wire-Drawn Copper P. Gerber, S. Jakani, T. Baudin, M.H. Mathon and R. Penelle	135

Determination of the Recovery Kinetics during the Annealing of Cold Rolled Low Carbon Steels	
A. Martínez-de-Guereñu, F. Arizti and I. Gutiérrez	141
Recrystallization Kinetics in the Bulk and at the Surface	
D. Juul Jensen, M.D. Lund, A.W. Larsen and J.R. Bowen	147
Effect of the Degree of Order and the Deformation Microstructure on the Kinetics of Recrystallisation in a Fe₃Al Ordered Alloy	
S. Kobayashi, S. Zaefferer, A. Schneider, D. Raabe and G. Frommeyer	153
Micro-Scale OIM Study on the Recrystallization Process of Cold Rolled α-Fiber Single Crystal	
S. Nakamura and H. Homma	159
On the Production of Randomly-Oriented Recrystallization Nuclei for Selective Growth Experiments	
M.D. Nave, K. Verbeken and L.A.I. Kestens	165
Recrystallization Nucleation in Some Channel Die Deformed, High Symmetry Aluminium Bicrystals	
H. Paul and J.H. Driver	171
The Formation of New Orientations during Recrystallization of Silver Single Crystals with {112}<111> Initial Orientation	
H. Paul, J.H. Driver, C. Maurice and A. Piątkowski	177
Recovery and Recrystallization Study after Low Deformation Amount by Cold Rolling in an IF-Ti Steel	
A. Samet-Meziou, A.L. Etter, T. Baudin and R. Penelle	183
In-Situ Measurements of Growth of Nuclei within the Bulk of Deformed Aluminium Single Crystals	
S. Schmidt, X. Huang and D. Juul Jensen	189
Effects of Nuclei Clustering on Recrystallization Kinetics	
R.A. Vandermeer and D. Juul Jensen	193
Growth Rate Distributions during Recrystallization of Copper	
R.A. Vandermeer, E.M. Lauridsen and D. Juul Jensen	197
Evaluation of Selective Growth in a Fe-2.8%Si Single Crystal Using Rodrigues-Frank Space	
K. Verbeken, L.A.I. Kestens and M.D. Nave	203
Microstructural Coarsening during Annealing of Cold Rolled Aluminum	
Q. Xing, X. Huang and N. Hansen	209
Effect of Post Weld Heat Treatment on Microstructure and Mechanical Properties of Welded 2205 Duplex Stainless Steel	
R. Badji, B. Belkessa, H. Maza, M. Bouabdallah, B. Bacroix and C. Kahloun	217
Microstructural Control in Thick-Walled Nb-Ti-V Microalloyed Linepipe Steels	
K.M. Banks	223
Recovery and Recrystallization in Cold Worked Fe – O Steels	
A. Belyakov, Y. Sakai, T. Hara, Y. Kimura and K. Tsuzaki	229
Study of Texture and Recrystallization in Wire Steel	
Z. Bumerzoug, N. Lahraki and M. Zidani	235
Cold Rolled Microstructure and Its Evolution during Recovery and First Recrystallisation Stages in Low Carbon Steels	
M. Díaz-Fuentes, E. Novillo, A. Iza-Mendia and I. Gutiérrez	241
Thermomechanical Behavior of Rapidly Solidified Fe-25Cr-20Ni	
M. Draissia, N. Boukhris and M.Y. Debili	247
Static Recrystallization of Ti-IF Steel after Warm Deformation	
R. Ebrahimi, A. Oudin, A. Najafi-Zadeh, M.R. Barnett and P. Hodgson	251
Recrystallisation Texture of Cold Rolled and Annealed IF Steel Produced from Ferritic Rolled Hot Strip	
A. Elsner, R. Kaspar, D. Ponge, D. Raabe and S. van der Zwaag	257
Difference in Recrystallization Behavior between Martensite and Deformed Ferrite	
Y. Futamura, M. Natori, T. Tsuchiyama and S. Takaki	263
On {h,1,1}<1/h,1,2>, the Recrystallisation Texture of Heavily Cold Rolled BCC Steel	
H. Homma, S. Nakamura and N. Yoshinaga	269

Effect of the Strain Reversal on the Microstructure and the Recrystallization Kinetics of the Austenite	
D. Jorge-Badiola, A. Iza-Mendia and I. Gutiérrez	275
Hot Strain Diagrams, Strengthening and Recrystallization of Nitrogen Alloyed Steels	
L.M. Kaputkina, V. Prokoshkina and Y.I. Lojnikov	281
Grain Refinement and Texture Change in Interstitial Free Steels after Severe Rolling and Ultra-Short Annealing	
L.A.I. Kestens, A.C.C. Reis, W. Kaluba and Y. Houbaert	287
Characteristics of the Static Recrystallization Kinetics of an Intercritically Deformed C-Mn Steel	
H. Luo, J. Sietsma and S. van der Zwaag	293
Effect of the Coupling of Recovery and Precipitation on the Recrystallization Behavior of Ti-Stabilized Extra Low Carbon Steels	
E.H. Na, J.Y. Choi, B. Sung and H.C. Lee	299
Grain Growth after Intercritical Rolling	
R.H. Petrov, L.A.I. Kestens, K. Verbeken and Y. Houbaert	305
Rolling and Recrystallization Texture of Cold Rolled IF Steel: A Study from Low to High Deformation	
M.Z. Quadir, Y.Y. Tse, K.T. Lam and B.J. Duggan	311
Coupling Recrystallization and Texture to the Mechanical Properties of Ferritic Stainless Steel Sheet	
C.W. Sinclair and J.D. Mithieux	317
Impact of Coil Cooling Rate on Texture, Special Boundaries and Properties of Hot Rolled Strip	
V.I. Slavov, V.V. Chaschin, S.N. Kostylev, O.M. Naumova, O.S. Khlybov and A.V. Puchkov	323
Modelling Recovery and Recrystallisation Kinetics after Intercritical Deformation in 0.19 wt% C 1.5 wt% Mn Steel	
A. Smith, A. Miroux, H. Luo, J. Sietsma and S. van der Zwaag	329
Validation of the New Regression Model for the Static Recrystallisation of Hot-Deformed Austenite in Special Steels	
M.C. Somani and L.P. Karjalainen	335
Effect of Strain on Deformation Microstructure and Subsequent Annealing Behavior of IF Steel Heavily Deformed by ARB Process	
N. Tsuji, N. Kamikawa and Y. Minamino	341
Industrial Application of Recrystallization Control in Aluminum Products	
H. Weiland	349
Recrystallization and Texture Development in Hot Rolled 1050 Aluminum	
M.H. Alvi, S.W. Cheong, H. Weiland and A.D. Rollett	357
Inhomogeneity of Texture, Particle Precipitation and Grain Size under Recrystallization of Al-Mg, Al-Mg-Li and Al-Mg-Sc Alloys	
S.Y. Betsofen and A.L. Lapin	363
The Effect of Sc on the Extrudability and Recrystallisation Resistance of Al-Mn-Zr-Alloys	
B. Forbord, H. Hallem and K. Marthinsen	369
The Effect of Strain Path on the Recrystallisation of an Aluminium Manganese Alloy	
R.L. Higginson	375
Development of Grain Structure and Texture during Annealing in Asymmetrically Rolled AA5754	
H.O. Jin and D.J. Lloyd	381
Microstructural Parameter-Based Characterization of Annealing Behaviour in Metals Deformed to High Strains	
Q. Liu, W.Q. Cao and A. Godfrey	387
Recrystallisation and Concurrent Precipitation in Hot Rolled AA3103	
A. Miroux, Z.J. Lok and S. van der Zwaag	393
Effect of Solution Heat Treatment and Additives on the Microstructure of Al – Si (A413.1) Automotive Alloys	
M.A. Moustafa, F.H. Samuel and H.W. Doty	399
Prediction of Static Recrystallisation after Extrusion of Shaped Aluminium Sections	
Z. Peng and T. Sheppard	407

New Grain Formation in a Coarse-Grained 7475 Al Alloy during Severe Hot Forging O. Sitdikov, T. Sakai, A. Goloborodko, H. Miura and R. Kaibyshev	421
Texture Changes during Uniaxial Compression of Mg-3Al-1Zn P. Backx, M.R. Barnett and L.A.I. Kestens	429
Effect of Grain Size on the Deformation and Dynamic Recrystallization of Mg-3Al-1Zn M.R. Barnett, D. Atwell and A.G. Beer	435
Grain Growth Texture Evolution in Zirconium (Zr702) and Commercially Pure Titanium (T40) N. Bozzolo, N. Dewobroto, T. Grosdidier, P. Barb��ris and F. Wagner	441
Texture Development of Ni₃Al Thin Foils during Recrystallization and Grain Growth M. Demura, K. Kishida, Y. Xu and T. Hirano	447
Experimental Investigations of Recrystallization Texture Development in Zirconium (Zr702) N. Dewobroto, N. Bozzolo, P. Barb��ris and F. Wagner	453
The Recrystallization Behaviour of CP-Titanium F.M. G����� and H. ��imenog��lu	459
Whisker Growth from Tin Coatings W.B. Hutchinson, J. Oliver, M. Nyl��n and J. Hagstr��m	465
Influence of Oxygen Content on the Static Recrystallization of ETP Copper S. Jakani, M.H. Mathon, P. Gerber, M. Benyoucef, C.-. De Novion and T. Baudin	471
Recrystallization Behaviour of Two Magnesium Alloys L.W.F. Mackenzie, G.W. Lorimer, J.F. Humphreys and T. Wilks	477
Magnetically Controlled Recrystallization Texture in Titanium D.A. Molodov and A.D. Sheikh-Ali	483
Structure Evolution of Zirconium Alloys during Deformation/Heat Treatment S.A. Nikulin, A.B. Rojnov and M.M. Peregud	489
Microstructure and Texture Development during Recrystallization of Rolled Molybdenum Sheets I. H��nsche, C.G. Oertel, R. Tamm, W. Skrotzki and W. Knabl	495
Formation of Grain Boundary Misorientation Spectrum in Alpha-Beta Titanium Alloys with Lamellar Structure under Warm and Hot Working G.A. Salishchev, S.V. Zerebtsov, S.Y. Mironov and S.L. Semiatin	501
In-Grain and Grain-to-Grain Textural Inhomogeneities in Coarse-Grained Tantalum H.R.Z. Sandim, J.P. Martins, A.L. Pinto and A.F. Padilha	507
Microstructural Path of Recrystallization in an Electron Beam Melted Ta-10wt% Alloy H.R.Z. Sandim, B.F.S. Matos, G.S. Fonseca and P.R. Rios	513
An EBSD Study on Orientation Effects during Recrystallization of Coarse-Grained Niobium H.R.Z. Sandim and D. Raabe	519
Recrystallization of Iron Aluminides W. Skrotzki, K. Kegler, R. Tamm and C.G. Oertel	525
Grain Refinement in Magnesium Alloy AZ31 during Hot Deformation X.Y. Yang, H. Miura and T. Sakai	531
Microstructure and Texture Evolution during Static Recrystallization of Zr-2Hf Alloy K. Zhu, D. Chaubet, B. Bacroix and J.L. B��chade	537
Recrystallization and Grain Growth in Rocks and Minerals D.J. Prior, M. Bestmann, A. Halfpenny, E. Mariani, S. Piazzolo, J. Tullis and J. Wheeler	545
Recrystallization in Deformed and Heat Treated PET Polymer Sheets D. Raabe and N. Chen	551
A Modern Approach to Control Grain Boundaries in Ceramics T. Sakuma, Y. Ikuhara and T. Yamamoto	557
The Effect of Humidity on Recrystallization and Aging of Plastically Deformed Alkali Halide Crystals E.B. Borisenko and B.A. Gnesin	567
Using Electron Backscatter Diffraction (EBSD) to Measure Misorientation between ‘Parent’ and ‘Daughter’ Grains. Implications for Recrystallisation and Nucleation A. Halfpenny, D.J. Prior and J. Wheeler	573

Microstructural Evolution of Synthetic Forsterite Aggregates Deformed to High Strain A. Kellermann Slotemaker, J.H.P. de Bresser, C.J. Spiers and M.R. Drury	579
Recrystallization Microstructures during Creep of MgO Single Crystals E. Mariani, J. Mecklenburgh, D.J. Prior and J. Wheeler	585
Texture of High Temperature Superconductor Thick Films TI-1223 and TI-2223/LaAlO₃ Deposited by Spray Pyrolysis H. Nguyen Xuan, S. Beauquis, P. Galez, J.L. Jorda, S. Phok and D. De-Barros	591
Investigation of Subgrain Rotation Recrystallization in Dry Polycrystalline NaCl G.M. Pennock, M.R. Drury and C.J. Spiers	597
Simulation of Spherulite Growth during Polymer Crystallization by Use of a Cellular Automaton D. Raabe	603
A Subgrain Growth Model for Strain-Free Grain Nucleation during Recrystallization E.A. Holm, M.A. Miodownik and K.J. Healey	611
Modeling of Nucleation Spectra for Primary Recrystallization and Application to Through-Process Texture Modeling M. Crumbach, M. Goerdeler and G. Gottstein	617
Modelling Recrystallisation during Thermomechanical Processing Using CAFE S. Das, E.J. Palmiere and I.C. Howard	623
A Coupled Recovery/Recrystallisation Model for Zirconium Alloys. Influence of Hydrogen J. Dunlop, Y. Bréchet and L. Legras	629
Monte Carlo Modelling of Recrystallization Mechanisms in Wire-Drawn Copper from EBSD Data P. Gerber, J. Tarasiuk, D. Solas, S. Jakani, M.H. Mathon and T. Baudin	635
Coupled Computer Simulations of Recrystallization in Deformed Polycrystals E.A. Holm, K.J. Healey and C.C. Battaile	641
Numerical Experiments into the Localization of Deformation during Recrystallization Flow M.W. Jessell, P.D. Bons, L. Evans and S. Piazolo	647
Development of Two-Dimensional Vertex Type Model K. Piękoś, J. Tarasiuk, K. Wierzbowski and B. Bacroix	653
Cellular Automata Simulation of the Effect of Nuclei Distribution on the Recrystallization Kinetics P.R. Rios, J.J.S. Carvalho, T.C. Salazar, F.V.L. Paula and J.A. de Castro	659
Monte Carlo Modelling of Recrystallization Process in Cold Rolled IF-Ti Steel A. Samet-Meziou, P. Gerber, J. Tarasiuk, T. Baudin and R. Penelle	665
Simulating the Topology of Recrystallization in Stabilized Ferritic Stainless Steels C.W. Sinclair, D. Weygand, J. Lépinoux and Y. Bréchet	671
Modelling the Softening Behaviour of Commercial AlMn-Alloys K. Sjølstad, K. Marthinsen and E. Nes	677
Microstructure Modeling as a Tool to Optimize Forging of Critical Aircraft Parts M. Stockinger and J. Tockner	683
Position Resolved In-Situ X-Ray Observation of Recrystallization and Its Description by Self-Organized Criticality T. Wroblewski	689
Grain Boundary Dynamics in High Magnetic Fields. Fundamentals and Implications for Materials Processing D.A. Molodov	697
Modeling the Impact of Grain Boundary Properties on Microstructural Evolution A.D. Rollett	707
Anisotropy in Grain Boundary Thermo-Kinetics: Atomic-Scale Computer Simulations M. Upmanyu, Z.T. Trautt and B.B. Kappes	715
Five-Parameter Grain Boundary Character Distribution in Fe-1%Si T.A. Bennett, C.S. Kim, G.S. Rohrer and A.D. Rollett	727
Effect of Anisotropic Interfacial Energy on Grain Boundary Distributions during Grain Growth J. Gruber, D.C. George, A.P. Kuprat, G.S. Rohrer and A.D. Rollett	733
Grain Boundaries with High Misorientation and Low Mobility L. Ryde, W.B. Hutchinson and T. Kumano	739

New Understanding of Abnormal Grain Growth Approached by Solid-State Wetting along Grain Boundary or Triple Junction N.M. Hwang	745
Impact of Boundary Orientation on the Motion of Curved Grain Boundaries in Aluminum Bicrystals V.A. Ivanov, D.A. Molodov, L.S. Shvindlerman and G. Gottstein	751
On the Effect of “Surface Triple Junction” on Grain Boundary Motion V.A. Ivanov, D.A. Molodov, L.S. Shvindlerman and G. Gottstein	757
Magnetically Driven Selective Grain Growth in Locally Deformed Zn Single Crystals P.J. Konijnenberg, D.A. Molodov and G. Gottstein	763
High Angle Grain Boundary Mobilities in a High Purity Single-Phase Al-0.1 wt% Mn Alloy A. Lens, C. Maurice and J.H. Driver	771
Effect of Triple Junctions on Grain Boundary and Grain Growth Kinetics in Aluminium - 10 ppm Magnesium Sheet D. Mattissen, D. Kirch, D.A. Molodov, L.S. Shvindlerman and G. Gottstein	777
Crystallographic Distribution of Internal Interfaces in Spinel Polycrystals H.M. Miller, D. Saylor, B.S. El Dasher, A.D. Rollett and G.S. Rohrer	783
Segregation of Calcium to Magnesium Oxide Grain Boundaries F. Papillon, P. Wynblatt and G.S. Rohrer	789
Some Features of the Triple Junction Motion in Aluminium S. Protasova and V.G. Sursaeva	795
Athermal Motion of Grain Boundaries, Twins and Triple Junctions in Zn V.G. Sursaeva	801
Grain Boundary Structure and Its Energy of <110> Symmetric Tilt Boundary in Copper N. Takata, K. Ikeda, F. Yoshida, H. Nakashima and H. Abe	807
Effects of Overall Grain Boundary Nature on Localized Corrosion in Austenitic Stainless Steels D.N. Wasnik, V. Kain, I. Samajdar, B. Verlinden and P.K. De	813
In-Situ Observations on Interphase Boundary Migration and Grain Growth during α/γ Phase Transformation in Iron Alloys T. Watanabe, K. Obara and S. Tsurekawa	819
Grain Boundary Roughening Transition D.Y. Yoon, Y.K. Cho and H.M. Jang	825
Grain Boundary Migration of <110> Tilt $\Sigma 11$ and $\Sigma 27$ Boundaries in Pure Aluminum F. Yoshida, M. Uehara, K. Ikeda, H. Nakashima and H. Abe	835
Abnormal Grain Coarsening and Its Possible Relationship with Particle Limited Normal Grain Coarsening R.D. Doherty, E. Hoffman, C. Hovanec and A. Lens	843
Secondary Recrystallization in Grain-Oriented Silicon Steel Y. Ushigami, T. Kumano, T. Haratani, S. Nakamura, S. Takebayashi and T. Kubota	853
Evaluation of the Austenitic Grain Growth by Thermoelectric Power Measurements C. Capdevila, T. De Cock, F.G. Caballero, C. Garcia-Mateo and C. García de Andrés	863
Evolution of Non-Oriented Silicon Steel Texture on Recrystallization and Grain Growth M.A. Da Cunha and S. Da Costa Paolinelli	869
Results from In-Situ, Real-Time SEM Observations of Grain Growth in Polycrystalline Metal I.M. Fielden	875
Role of Silicon Content and Final Annealing Temperature on Microtexture and Microstructure Development in Non-Oriented Silicon Iron Y. Hu, V. Randle and T. Irons	881
Comparison of the Morphological Effect for the Simulation of Abnormal Goss Grain Growth in Two Fe-3%Si Alloys, Grades Hi-B and CGO N. Maazi, N. Rouag and R. Penelle	887
Study of the Texture Formation during Strain Induced Boundary Migration in Electrical Steel Sheets K. Murakami, J. Tarasiuk, H. Réglé and B. Bacroix	893
Sharpening of Cube Texture during Grain Growth in High Purity Aluminum T. Murakami and S. Ochiai	899

Effect of Copper Addition on Grain Growth Behavior of Austenite in Low Carbon Steels K. Nakashima, K. Imakawa, Y. Futamura, T. Tsuchiyama and S. Takaki	905
Anisotropy of Grain Boundary Migration Observed in Situ by Synchrotron Radiation V. Paidar, P. Lejček, M. Polcarová, J. Brádler and A. Jacques	911
Microstructural Evidence of Abnormal Grain Growth by Solid-State Wetting in Fe-3%Si Steel H. Park, Y.C. Joo, D.Y. Kim, J.T. Park, J.K. Kim and N.M. Hwang	917
Consideration of Crystallographic Neighbourhood in Magnetic Sheets of Fe3%Si. Behaviour Prediction of Grain Growth from the Texture Function N. Rouag, H. Afer and R. Penelle	923
Kinetics of Austenite Grain Growth during a Continuous Heating of a Niobium Microalloyed Steel D. San Martín, F.G. Caballero, C. Capdevila and C. Carcía de Andrés	929
Grain Growth in Al: First Results from a Combined Study of Bulk and In-Situ Experiments Using a Columnar Structured Al Foil S. Piazzolo, V.G. Sursaeva and D.J. Prior	935
Oriented Nucleation and Selective Growth during Secondary Recrystallization in Ultra Low Carbon Steels K. Verbeken and L.A.I. Kestens	941
3D Atom Probe Analysis on Nb and Mo Segregation during Recrystallisation of α-Fe N. Maruyama and G.D.W. Smith	949
Abnormal Grain Growth Effects on the Mechanical Behavior of Ni Electrodeposits O. Arnould, O. Hubert and F. Hild	957
Particle Evolution and Grain Growth during Annealing of a Complex Multiphase Al-Sn Triboalloy S.M. Cerrud, R. Schouwenaars, A. Ortiz and E.I. Ramírez	963
Measurement of Impurity Concentration at Grain Boundaries after Recrystallization M. Cornen and R. Le Gall	969
Static Recrystallization of FeAl in the Presence of Second Phase Particles: Experimental and Modeling Investigations S. Guessasma, E. Suzon, N. Rouag and T. Grosdidier	975
Introduction of Second Phase Particle Shape in Monte Carlo Grain Growth Simulation S. Guessasma and N. Rouag	981
Influence of Particle Mechanisms on Kinetics of Grain Growth in a P/M Superalloy Z. Huda	985
Grain Boundary Area, Grain Boundary Curvature and Particle Pinning in an Al-1mass%Mn Alloy Containing Al₆Mn Precipitates P.R. Rios and G.S. Fonseca	991
In-Situ Quantification of Solute Effects on Grain Boundary Mobility and Character in Aluminum Alloys during Recrystallization M.L. Taheri, A.D. Rollett and H. Weiland	997
Temporal Evolution of Grain Size Distributions in Two-Dimensional Pinned Cells C.H. Wörner and A. Olguín	1003
Finite Element Simulations of 3D Zener Pinning G. Couturier, C. Maurice, R. Fortunier, R. Doherty and J.H. Driver	1009
Evolving 3D Microstructures Using a Genetic Algorithm D. Basanta, M.A. Miodownik, E.A. Holm and P.J. Bentley	1019
Capillarity-Mediated Grain Growth in 3-D M.E. Glicksman	1025
Modelling Zener Pinning: A Comparison of Different Computer Simulation Methods A. Harun, M.A. Miodownik, M.P. Clode and E.A. Holm	1033
Critical Manifolds in Polycrystalline Grain Structures E.A. Holm, J.H. Meinke, E.S. McGarrity and P.M. Duxbury	1039
Introducing Solute Drag in Irregular Cellular Automata Modeling of Grain Growth K.G.F. Janssens, E.A. Holm and S.M. Foiles	1045
Grain Growth Microstructures as Indicators of Sample Evolution M.W. Jessell	1051

Mesoscale Simulation of Grain Growth D. Kinderlehrer, J.H. Lee, I. Livshits, A.D. Rollett and S. Ta'asan	1057
Mesoscale Simulation of the Evolution of the Grain Boundary Character Distribution D. Kinderlehrer, I. Livshits, G.S. Rohrer, S. Ta'asan and P. Yu	1063
Effect of Lattice Anisotropy on Simulations of Grain Boundary Movement in Two-Dimensions J. Kroc	1069
Monte Carlo Modeling of Cube Texture Evolution in Ni-Tapes during Grain Growth F. Lin, A. Godfrey, M.A. Miodownik and Q. Liu	1075
The Correlation Theory of 2D Normal Grain Growth M.W. Nordbakke, N. Ryum and O. Hunderi	1081
Grain Growth in Films with Initial 3D Microstructure V.Y. Novikov	1087
Triple Junction Controlled Grain Growth V.Y. Novikov	1093
Recrystallisation and Grain Growth in Batch Annealed Ti-IF Steels H. Petitgand, H. Réglé and U. Zimmermann	1099
Simulating the Interaction between a Straight Boundary and a Particle B. Radhakrishnan and G.B. Sarma	1105
The Von Neumann-Mullins Theory of Grain Growth – Valid or Not?! L.S. Shvindlerman, G. Gottstein and A.D. Rollett	1111
Monte Carlo Method for Simulating Grain Growth in 3D Influence of Lattice Site Arrangements D. Solas, P. Gerber, T. Baudin and R. Penelle	1117
On the Nucleation of Abnormal Grain Growth: A 2D Vertex Simulation D. Weygand, J. Lépinoux and Y. Bréchet	1123
Computer Simulations and Statistical Theory of Normal Grain Growth in Two and Three Dimensions D. Zöllner and P. Streitenberger	1129
The Role of Recrystallization and Coarsening in the Formation of Ultrafine Grained Steels through Thermomechanical Processing P. Hodgson and H. Beladi	1137
Geometric Dynamic Recrystallization in α-Zirconium at Elevated Temperatures S.R. Barrabes, M.E. Kassner, M.T. Pérez-Prado and E. Evangelista	1145
Dynamic Recrystallization of Zircaloy-4 during Working within the Upper α-Range C. Chauvy, P. Barbéris and F. Montheillet	1151
Softening Mechanisms in Two Duplex Stainless Steels Deformed in Hot Torsion P. Cizek	1157
Recrystallization in 304 Austenitic Stainless Steel A. Dehghan-Manshadi, H. Beladi, M.R. Barnett and P. Hodgson	1163
Study of Nucleation Mechanisms during Dynamic Recrystallization of a Coarse Nb Microalloyed Austenite A.I. Fernández-Calvo, B. López and J.M. Rodríguez-Ibabe	1169
Dynamic Recrystallization and Grain Growth in a ZK60 Magnesium Alloy Sheet Produced by Isothermal Rolling A. Galiyev and R. Kaibyshev	1175
Predicting Multiple Peak Dynamic Recrystallization of Copper V.G. García, J.M. Cabrera and J.M. Prado	1181
Dynamic Recrystallization of Dense Polycrystalline NaCl: Dependence of Grain Size Distribution on Stress and Temperature J.H. ter Heege, J.H.P. de Bresser and C.J. Spiers	1187
The Influence of Chemical Composition on the Kinetics of Dynamic Recrystallization of IF Austenite R.E. Lino and R. Barbosa	1193
Geometric Dynamic Recrystallization in an AA2219 Alloy Deformed to Large Strains at an Elevated Temperature R. Kaibyshev, I. Mazurina and O. Sitdikov	1199

Influence of TiN Particles on Dynamic and Static Recrystallization in Microalloyed Steels S.F. Medina, M.I. Vega and M. Gómez	1205
Microstructure and Texture Evolution during Continuous Dynamic Recrystallization at Warm Deformation of Titanium S.Y. Mironov, G.A. Salishchev and S.V. Zherebtsov	1211
Dynamic Twin Nucleation at Grain Boundary in Copper Bicrystal H. Miura, T. Sakai, R. Mogawa and G. Gottstein	1217
The Effect of Hydrogen on Dynamic Recrystallization in α-Titanium Alloys M.A. Murzinova, G.A. Salishchev and D.D. Afonichev	1223
Effect of Niobium and Titanium on the Dynamic Recrystallization during Hot Deformation of Stabilized Ferritic Stainless Steels T.R. Oliveira and F. Montheillet	1229
Stress Relaxation Measurements of Meta-Dynamic and Static Recrystallization of Alloy 80A S. Kleber and C. Sommitsch	1237
Dynamic Recrystallisation of Quartz J. Wheeler, Z. Jiang, D.J. Prior and J. Tullis	1243
Mechanisms of Grain Refinement in Aluminum Alloys during Severe Plastic Deformation R. Kaibyshev and I. Mazurina	1251
Stability of Ultra-Fine ‘Grain Structures’ Produced by Severe Deformation P.B. Prangnell, J.R. Bowen, M. Berta, P.J. Apps and P.S. Bate	1261
Development of an Ultrafine Grained Ferrite in a Low C-Mn Steel Intensely Deformed under Hot Torsion G. Azevedo, R. Barbosa and D.B. Santos	1271
Formation of High-Angle Grain Boundaries in Iron upon Cold Deformation by Equal-Channel Angular Pressing S.V. Dobatkin, V.I. Kopylov, R. Pippan and O.V. Vasil'eva	1277
Diffusion Creep during Grain Growth in Nanocrystalline Metals Y. Estrin, G. Gottstein and L.S. Shvindlerman	1283
Grain Growth and Texture Evolution during Annealing of Submicrocrystalline Titanium Produced by Severe Plastic Deformation S. Malysheva, G.A. Salishchev, S.Y. Mironov and S.Y. Betsofen	1289
Structural Evolution of IF Steel during Annealing after ECAP J. De Messemaeker, B. Verlinden and J. Van Humbeeck	1295
Recrystallization and Grain Growth in Al-Li Alloys Subjected to Severe Plastic Deformation J. Mizera, M. Lewandowska, B. Adamczyk-Cieślak and K.J. Kurzydłowski	1301
Synchrotron Radiation Investigation of Thermal Stability and Grain-Growth in Pure and Metal-Doped Nanocrystalline TiO₂ R. Nicula, M. Stir and E. Burkel	1307
Grain Growth and Texture Development in Nanostructured Invar Alloy J.K. Kim, J.H. Seo and Y.B. Park	1313
Thermal Stability of CP-Aluminium during Annealing after ECAE S. Poortmans and B. Verlinden	1319
A Recrystallisation Based Investigation for Efficiency of Processing Routes during Equal Channel Angular Extrusion S. Suwas, A. Eberhardt, L.S. Tóth, J. Funderberger and T. Grosdidier	1325
Self-Annealing Textures of Copper Damascene Interconnects D.N. Lee and H.J. Lee	1333
Abnormal Grain Growth in Electrochemically Deposited Cu Films M. Militzer, P. Freundlich and D. Bizzotto	1339
Thermal Stability of Electrodeposited Ni and Ni-Co Layers; an EBSD-Study A.A. Rasmussen, A. Gholinia, P.W. Trimby and M.A.J. Somers	1345
Laser-Ultrasonics as a Technique to Study Recrystallisation and Grain Growth E. Lindh-Ulmgren, M. Ericsson, D. Artymowicz and W.B. Hutchinson	1353
3DXRD – Mapping Grains and Their Dynamics in 3 Dimensions H.F. Poulsen, X. Fu, E. Knudsen, E.M. Lauridsen, L. Margulies and S. Schmidt	1363

Three-Dimensional Micron-Resolution X-Ray Laue Diffraction Measurement of Thermal Grain-Evolution in Aluminum	
J.D. Budai, W. Yang, B.C. Larson, J.Z. Tischler, W. Liu, H. Weiland and G.E. Ice	1373
Recrystallization Texture and Microstructure in Ni and AlMg1Mn1 Determined with High-Energy Synchrotron Radiation	
H. Klein, A. Preusser, H.J. Bunge and L. Raue	1379
A Technique for Real-Time, In-Situ SEM Observation of Grain Growth at Elevated Temperatures	
I.M. Fielden and J.M. Rodenburg	1385
In-Situ Observation of Subgrain Evolution during Static Recovery of Cold-Rolled Aluminium	
C. Gundlach, W. Pantleon, E.M. Lauridsen, L. Margulies, R.D. Doherty and H.F. Poulsen	1389
Experimental Energetic Balance Associated to the Deformation of an Aluminum Multicrystal and Monocrystal Sheet	
H. Louche and L. Tabourot	1395
In-Situ EBSD Investigation of Recrystallization in ECAE Processed Copper	
M.M. Nowell, D.P. Field, S.I. Wright and T.M. Lillo	1401
The Potential of Combined In-Situ Heating Experiments and Detailed EBSD Analysis in the Investigation of Grain Scale Processes such as Recrystallization and Phase Transformation	
S. Piazzolo, G.G.E. Seward, N. Seaton and D.J. Prior	1407
Application of the Repere Diffraction to Study Special Grain Boundaries in Recrystallized Metal	
V.I. Slavov, O.M. Naumova, S.N. Kostylev and A.V. Puchkov	1413