

**Georges MARTIN's list of publications, 1967 to present.**

+ Published lecture or conference; \* points to the name of the speaker

- 1 Autodiffusion au joint de grains de bicristaux d'argent soumis à une pression hydrostatique  
(Grain-boundary self-diffusion in silver bicrystals under hydrostatic pressure)  
G. MARTIN, D.A. BLACKBURN, Y. ADDA  
Phys. Stat. Sol. **23** (1967) 223
- 2 Considérations sur la relation entre le fluage sous irradiation et les dommages créés par l'irradiation en l'absence de contrainte :  
(On the relationship between creep under irradiation and irradiation damage in the absence of stress)  
G. MARTIN, J.P. POIRIER  
J. Nucl. Mater. **39** (1971) 93
- 3 Tables de valeurs numériques pour les études de diffusion intergranulaire :  
(Numerical tables for grain-boundary diffusion studies)  
G. MARTIN  
Report C.E.A. - R - 4363 (1972)
- 4 Comment on "Mass transport along grain boundary pipe lines in KBr" :  
G. MARTIN  
Scrip. Met. **6** (1972) 437
- 5 Electromigration intergranulaire de l'antimoine dans l'argent :  
(Grain boundary electromigration of Antimony in Silver)  
G. MARTIN  
Phys. Stat. Sol. **14** (1972) 183
- 6 Observation d'un cristal bidimensionnel de lignes de dislocations dans le chlorure de sodium  
(Observation of a two-dimensional crystal of dislocation lines in sodium chloride)  
J.P. POIRIER, G. MARTIN  
Phil. Mag. **27** (1973) 1455
- 7 Pressure dependence of self diffusion of Na<sup>22</sup> in NaCl :  
G. MARTIN, D. LAZARUS, J.L. MITCHELL  
Phys. Rev. **B8** (1973) 1726
- 8 Mise en évidence par effet Mössbauer de rassemblements de Cobalt dans les joints de grains du Beryllium :  
(Mössbauer effect evidence for Cobalt clustering at grains-boundaries in Beryllium)  
G. MARTIN  
Phys. Stat. Sol. **a18** (1973) 683
- 9 + L'électromigration intergranulaire : outil d'étude de la structure de coeur des joints de grains :  
(Grain-boundary electromigration as a tool to study grain-boundary core structure)  
G. MARTIN\*, P. TRUCHOT  
Can. Met. Quartely **13** (1974) 111
- 10 Atomic model for grain boundary and surface diffusion :  
P. BENOIST, G. MARTIN  
Thin Solid Films **25** (1975) 181

- 11 Mesure des coefficients de diffusion interfaciale :  
(Measuring interface diffusion coefficients)  
G. MARTIN  
Acta Met. **23** (1975) 697
- 12+ Modèle atomique de diffusion intergranulaire : II Généralisation :  
(Atomic model for grain-boundary diffusion : II general case)  
P. BENOIST\*, G. MARTIN  
J. de Physique, Colloque **36** (1975) C4-213
- 13+ La diffusion intergranulaire :  
(Grain-boundary diffusion)  
G. MARTIN\*, B. PERRAILLON  
J. de Physique, Colloques **36** (1975) C4-166
- 14 Instabilité des solides cristallins sous irradiation :  
(Instability of crystalline solids under irradiation)  
G. MARTIN  
Phil. Mag. **32** (1975) 615
- 15+ Stability of void lattices under irradiation : a kinetic model :  
P. BENOIST\*, G. MARTIN : in "Fundamental aspects of radiation damage in metals"  
USERDA CONF-751006-P2 (1975) II-1236
- 16+ A simple model for phase stability under irradiation :  
G. MARTIN\* : in "Fundamental aspects of radiation damage in metals"  
USERDA CONF-751006-P2 (1975) II-1084
- 17+ Stabilité morphologique des systèmes biphasés :  
(Morphological stability of two-phases systems)  
G. MARTIN\* : in "Surfaces et interfaces en métallurgie"  
Trans. Tech. Publications (1975) 281
- 18 Measurement of grain-boundary self diffusion coefficient in single phase binary solid solutions :  
J. BERNARDINI, G. MARTIN  
Script. Met. **10** (1976) 833
- 19 Calcul de la fréquence moyenne de saut des atomes le long de joints de grains à structure  
périodique :  
(Calculation of the atomic mean jump frequency along periodic  
grain-boundary structures)  
V. COSTE, P. BENOIST, G. MARTIN : in "La diffusion dans les milieux condensés",  
19ème Colloque de Métallurgie, INSTN Saclay (1977) I-507
- 20+ La diffusion dans les milieux minces :  
(Diffusion in thin media)  
G. MARTIN\*, B. PERRAILLON : in "La diffusion dans les milieux condensés",  
19ème Colloque de Métallurgie, INSTN Saclay (1977) I-367
- 21 Limites de validité de l'équation de Fick :  
(Validity limit for Fick's law)  
G. MARTIN, P. BENOIST  
Script. Met. **11** (1977) 503
- 22 A model for morphological changes driven by step-step interaction on clean surfaces :  
G. MARTIN, B. PERRAILLON  
Surf. Sci. **68** (1977) 57

- 23 Radiation induced precipitation in NiSi solid solutions : II dose-rate effects :  
A. BARBU, G. MARTIN  
Scrip. Met. **11** (1977) 771
- 24+ Fundamental aspects of the evolution of and phase changes in metals and alloys under irradiation  
G. MARTIN\*, J.L. BOCQUET, A. BARBU, Y. ADDA : in "Radiation effects in breeder reactor structural materials"  
Bleiberg et Bennet Editors, AIME (1977) 899
- 25+ Void lattices and other radiation induced periodic structures :  
G. MARTIN\*  
J. de Physique Colloque **38** (1977) C7-419
- 26 Radiation induced solute redistribution and precipitation :  
G. MARTIN  
Phil. Mag. A **38** (1978) 131
- 27+ Radiation induced homogeneous precipitation in undersaturated solid solutions :  
R. CAUVIN, G. MARTIN\*  
J. Nuclear Mat. **83** (1979) 67
- 28+ Irradiation induced precipitation : a thermodynamical approach :  
J.L. BOCQUET\*, G. MARTIN  
J. Nuclear Mat. **83** (1979) 186
- 29 The contribution of dissipative processes to radiation induced solid solution instability :  
G. MARTIN  
Phys. Rev. B **21** (1980) 2122
- 30+ Stabilité des alliages sous irradiation :  
(Alloys stability under irradiation)  
G. MARTIN\*, R. CAUVIN, J.L. BOCQUET, A. BARBU : in "Comportement sous irradiation des matériaux métalliques et des composants des coeurs des réacteurs rapides"  
Poirier et Dupouy Ed. C.E.A. (1979) 75
- 31+ Measurements of grain boundary diffusion :  
G. MARTIN\*, B. PERRAILLON : in "Grain-boundary structure and kinetics"  
ASM (1980) 239
- 32 Low flux radiation induced precipitation :  
A. BARBU, A. CHAMBEROD, G. MARTIN  
J. Appl. Phys. **51** (1980) 6192
- 33+ The theories of unmixing kinetics of solid solutions :  
G. MARTIN\* : in "Solid state phase transformations in metals and alloys"  
Editions de Physique, Orsay, France (1980) 337
- 34+ Transformations de phases et plasticité :  
(Phase transformations and plasticity)  
G. MARTIN\*  
Ann. Chim. Fr. **6** (1981) 46
- 35 On F.C.C. polycrystals under hydrostatic pressure :  
G. MARTIN  
Script. Met. **14** (1980) 869
- 36 Solid solutions under irradiation : I model for radiation induced metastability :

- R. CAUVIN, G. MARTIN  
Phys. Rev. B **23** (1981) 3322
- 37 Solid solutions under irradiation : II radiation induced precipitation in AlZn under-saturated solid solutions :  
R. CAUVIN, G. MARTIN  
Phys. Rev. B **23** (1981) 3333
- 38+ Dose-rates effects on solid solution stability :  
G. MARTIN\*, R. CAUVIN, J.L. BOCQUET, A. BARBU : in "Phase stability during irradiation"  
Holland, Mansur, Potter Eds. AIME (1982) 43
- 39+ Apports de la microscopie électronique à l'étude des changements de phase sous irradiation (Contribution of electron microscopy to the understanding of phase changes under irradiation)  
G. MARTIN\*, R. CAUVIN, A. BARBU  
J. Microsc. Electronique **6** (1981) 383
- 40+ Effects of irradiation on phase stability and phase changes :  
G. MARTIN\*, R. CAUVIN, A. BARBU : in "Solid-solid phase transformations"  
Aaronson et al. Eds. AIME (1982) 257
- 41+ Radiation induced solid solution instability :  
R. CAUVIN\*, G. MARTIN  
Référence 40, p. 281
- 42+ Radiation induced destabilization of Al base solid solutions :  
R. CAUVIN\*, G. MARTIN  
Référence 40, p. 287
- 43+ Precipitate coarsening in alloys under irradiation :  
K. URBAN\*, G. MARTIN  
Référence 40, p. 317
- 44 Solid solutions under irradiations : III further comments :  
R. CAUVIN, G. MARTIN  
Phys. Rev. B **25** (1982) 3385
- 45 Precipitate coarsening induced by point defect recombination in alloys under irradiation :  
K. URBAN, G. MARTIN  
Acta Met. **30** (1982) 1209
- 46+ A reaction-diffusion model of solid solutions under irradiation :  
R. CAUVIN, G. MARTIN\* : Proc. Yamada Conf. V, Point Defects and Defects Interactions in Metals, Takamura et al. Eds., U. of Tokyo Press (1982) 931
- 47+ Free energy calculation of small clusters :  
G. MARTIN\*, A. PERINI, G. JACUCCI  
Référence 46, p. 718
- 48 Modèle simple d'évolution de la microstructure des solides sous irradiation : (Simple model for microstructural evolution under irradiation)  
P. VALENTIN, G. MARTIN  
Phil. Mag. A **46** (1982) 971
- 49+ Irradiation induced solid solutions instability :  
G. MARTIN\*, R. CAUVIN, J.L. BOCQUET, A. BARBU  
Référence 46, p. 923

- 50 Monte-Carlo computation of clusters free energies in the Ising model : a test for the validity of the capillarity approximation :  
G. JACUCCI, A. PERINI, G. MARTIN  
J. Phys. A : Math. Gen. **16** (1983) 369
- 51+ Cooperative effects in microstructural evolutions under irradiation : fundamental aspects  
P. VALENTIN\*, G. MARTIN : in "Effects of radiation on materials"  
ASTM STP782, Brager, Perrin Eds., ASTM (1982) 1103
- 52+ Synergistic effects during high temperature irradiation :  
P. VALENTIN, G. MARTIN\* : in "Dimensional stability under irradiation"  
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- 53 Les changements de phase sous irradiation :  
G. MARTIN, R. CAUVIN, J.L. BOCQUET, A. BARBU  
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- 54 Solid solution stability under irradiation :  
G. MARTIN, R. CAUVIN, A. BARBU : in "Phase transformation during irradiation"  
F. Nolfi Ed., Appl. Sci. London (1983) 42
- 55 Long range periodic decomposition of irradiated solid solutions :  
G. MARTIN  
Phys. Rev. Letters **50** (1983) 250
- 56+ Implantation, ion beam mixing and solid state solubility :  
G. MARTIN\*, A. BARBU  
J. Nucl. Inst. Meth. **209-210** (1983) 203
- 57 Phase stability under irradiation : Ballistic effects :  
G. MARTIN  
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- 58 Clusters free energy in the simple cubic Ising Model :  
A. PERINI, G. JACUCCI, G. MARTIN  
Phys. Rev. **B29** (1984) 2689
- 59+ Interfacial contribution to clusters free energy :  
A. PERINI, G. JACUCCI, G. MARTIN\*  
Surf. Sci. **144** (1984) 53
- 60+ Phase stability under irradiation :  
G. MARTIN\*, A. BARBU  
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1984 (Pergamon, Paris) 70
- 61+ Evolution microstructurale sous irradiation à hautes températures : aspects fondamentaux  
(Microstructural evolution under high temperature irradiation : fundamental aspects)  
G. MARTIN\*, P. VALENTIN  
Ann. Chim. Fr. **9** (1984) 193
- 61bis+ Basic aspects of microstructural evolution under high temperature irradiation :  
G. MARTIN\*, P. VALENTIN  
in "Computer Simulation in Physical Metallurgy" G. Jacucci Editor, 1986, ECSC, EEC, Brussels,  
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- 62 Biais des dislocations dans les alliages dilués :  
(Dislocations bias in dilute alloys)

P. VALENTIN, G. MARTIN  
Phil. Mag. **51** (1985) 715

- 63 Premières évaluations des dégâts d'irradiation par ions lourds de très haute énergie à GANIL  
(First observations of radiation damage by heavy ions with very high energy at GANIL)  
A. BARBU, G. MARTIN, M. TOULEMONDE, J.C. JOUSSET  
C.R.A.S. 299, Série II, n°8 (1984) 409
- 64 Cavitation en volume dans des solutions binaires à base de Nickel fatiguées à haute température  
(Bulk cavitation in Ni base alloys under high temperature cyclic loading)  
B. ARNAUD, R. Le HAZIF, G. MARTIN  
Acta Met. **33** (1985) 1105
- 65+ Evolution structurale et cavitation en volume dans un alliage NiGe 6 at% fatigué à 0.5 Tf :  
( Microstructural évolution and bulk cavitation in a NiGe 6 at% Alloy under cyclic loading  
at .5 Tm)  
B. ARNAUD, R. Le HAZIF\*, G. MARTIN  
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- 66+ Stability criteria for phases under irradiation :  
G. MARTIN\*, P. BELLON : in "Solute-defect interaction - Theory and experiments"  
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- 67+ Alloys evolution under irradiation :  
G. MARTIN\*, P. BELLON  
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- 68+ Saturation of irradiation induced precipitation :  
G. MARTIN\*  
in : "Atomic transport and defects in metals by neutron scattering"  
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- 69+ Point defect dynamics in non homogenous alloys under irradiation :  
C. ABROMEIT\*, G. MARTIN  
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N.H. Packan, A.S. Kunar Eds., ASTM-STP 955 (1987) 822 (T4010-13 Vol. 1)
- 70 A simple model for the crystal to amorphous phase transition under Laser annealing  
conditions :  
E. GAFFET, G. MARTIN  
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- 70 Bis Determination of the activation energies for nucleation and growth of crystal nuclei in metallic  
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E. GAFFET, G. DELUZE, G. MARTIN, J.M. PELLETIER and D. PERGUE  
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- 72+ Microstructure of rapidly quenched (Al, Mn) alloys :  
K. YU ZHANG\*, J. BIGOT, G. MARTIN, R. PORTIER, D. GRATIAS  
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- 73+ Irradiation induced formation of metastable phases : a theoretical approach :

- P. BELLON\*, G. MARTIN  
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- 74+ Theoretical approaches to phase stability criteria under irradiation :  
G. MARTIN\*, P. BELLON  
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- 75+ Stability criteria for phases under irradiation :  
G. MARTIN\*, P. BELLON  
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- 76+ Amorphization by solid state diffusion in granular system :  
E. GAFFET\*, J. BIGOT, G. MARTIN  
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The Inst. of Metals : Cambridge (1987) p. 604
- 77+ Mécanisme d'amorphisation par faisceau Laser d'un acier riche en métalloïdes :  
Laser amorphisation mechanism of a metalloid rich steel  
E. GAFFET\* G. DELUZE, G. MARTIN, and J.M. PELLETIER  
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- 78 Dodecahedral shaped quasicrystalline precipitates in dilute AlMn solid solutions :  
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Phil. Mag. B **58** (1988) 1-13
- 79+ Metastable phases formation under irradiation :  
G. MARTIN\*, P. BELLON  
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- 80 Modèle d'évolution morphologique des superalliages hors contrainte  
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- 81 Incubation time and frequency of pitting of passive layers :  
G. MARTIN, B. BAROUX  
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- 82 Amorphization by solid state diffusion in granular systems :  
E. GAFFET, J.C. ANGLEZIO, J. BIGOT, G. MARTIN  
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- 83 An electron microscopy study of the formation of amorphous alloys by mechanical alloying in the NiZr system :  
E. GAFFET\*, N. MERK, , G. MARTIN, J. BIGOT  
in "New Materials by Mechanical Alloying Techniques" E. Artz et L. Schultz eds. Information Verlag Gesellschaft (1989) p. 95
- 84 Fluctuations around equilibrium and steady-states in solids under dynamical sollicitations :  
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(Trans. Tech., Suisse 1988) p. 109
- 85 Irradiation induced formation of metastable phases : a master equation approach :  
P. BELLON, G. MARTIN  
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- 86 Influence of substrate induced misfit stresses on Miscibility Gap in Epitaxial Layers Application to III - V Alloys :  
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- 87+ Coherency stress effects on the growth kinetics of thin films :  
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- 88+ Adiabatic approximation for irradiation induced instabilities in concentrated alloys :  
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- 89 Cascade effects in a non equilibrium phase transition with metallurgical relevance :  
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- 90+ Bulk and surface defects in implanted and annealed GaAs :  
P. BELLON\*, J.P. CHEVALIER, G. MARTIN, P. DECONINCK, J. MALUENDA  
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- 91+ Cascade effect on respective stability of ordered phases in Ni<sub>4</sub>Mo under irradiation :  
P. BELLON\*, G. MARTIN  
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- 92 Quantitative description of mixing with light ions :  
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- 93+ Ball milling amorphization mechanism of NiZr alloys :  
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- 94 Chemical ordering in GaxIn<sub>1-x</sub>P semiconductor alloys grown by metallorganic vapor phase epitaxy :  
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- 95 Substrate driven ordering microstructure in GaxIn<sub>1-x</sub>P alloys :  
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- 96 Chemical disorder induced amorphization in NiZr<sub>2</sub> : a constant temperature - constant pressure molecular dynamics study combined with the tight binding approach :  
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- 97+ Stochastic description of cascade size effects on phase stability under irradiation :  
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- 100+ Non linear effects in diffusion :  
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- 102+ Etude microstructurale de l'amorphisation superficielle d'un alliage base fer, irradié par  
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- 107+ Mechanical alloying : far from equilibrium phase transitions ? :  
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- 109b+Theoretical approaches of structural modifications induced by ion irradiation :

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- 110+ Ball milling amorphization in a vibrating frame grinder :  
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