RESUME

PATRICK VEYSSIERE,

Graduated in 1968 (University of Poitiers, France).

Permanent position (Director of Research) within the French National Agency for Scientific Research (CNRS) since 1998.

From 1968 until 1988, Assistant Professor at the University of Poitiers.

From 1988 to 2000, head of the Laboratory for Microstructural Studies (LEM), a joint goup of 30 persons (15 research permanent positions) co-sponsored by CNRS and National Agency for Space and Aircraft Research (ONERA), located in suburban Paris, Châtillon. French rules prevent the same person from heading a research group more than 12 years.

Main fields covered in the group :

- plasticity (experiments,
- simulations & modelling),
- TEM (mostly analytical),
- phase transformations (experiments, simulations & modelling),
- crystallography (quasicrystals and topologically complex phases, nanotubes).

The LEM is co-sponsored by CNRS and the National Agency for Space and Aircraft Research (ONERA).

Since 1983, my main research interest is concerned with plastic properties of alloys, such as intermetallic alloys, with special emphasis on relating macroscopic mechanical behaviour to properties of individual dislocations.

Before 1983, I was leading projects on the plastic poperties of ceramics and semiconductors.

I have authored about 160 papers including 80 in regular scientific journals.

Since 1995, I am an Associate Editor with Philosophical Magazine A (about 500 manuscripts edited so far). From january 2000 to june 2004, I have been Deputy Editor for Scripta Materialia. I am on the Advisory Board of Intermetallics since the creation of this Journal in 1992. Since 2002, I am Editor in Chief for the Encyclopedia of Materials (Elsevier) and Editor of Materials Transactions (Japan Institute of Metals).

I am currently refereeing proposals for the European Community, the Czech Republic, Switzerland, ECOS Nord, NSF, the US Army. I am a member of the Spanish National Evaluation Agency (ANEP, materials section).

I am reporting on applicants to a professorship position in the US. The University of Illinois at Urbana Champaign, Brown University, the Ohio State University, and Johns-Hopkins University have contacted me in the past few years.

I am guest lecturer (yearly 2002-2006) within a Center Of Excellence (COE) project at the University of Osaka (Professor Umakoshi), visiting the Department over a fortnight once a year.

LIST OF PUBLICATIONS

1. Veyssière P, Grilhé J: Influence de l'énergie de faute d'empilement sur la nature des boucles et la taille des hélices obtenues par trempe. In: *"7ème Congrès International de Microscopie Electronique"*. Edited by Favard P. Paris: SFME; 1970: 255-256.
2. Veyssière P, Grilhé J: The influence of coherent inclusions on the nature of dislocation loops in quenched metals. *Philosophical Magazine* 1971, 24:303-308.
3. Veyssière P, Grilhé J: Experimental study of the influence of some parameters on the helical dislocation equilibrium in quenched alloys. *Acta Metallurgica* 1971, 19:1047-1051.
4. Veyssière P, Gaboriaud RJ, Rabier J, Grilhé J: Possible configurations resulting from the Frank loop nucleation on screw dislocations. *Acta Metallurgica* 1972, 20(July):875-880.
5. Rabier J, Veyssière P, Grilhé J: Influence de l'énergie de faute d'empilement sur la nature des boucles et la taille des hélices. *Journal de Physique* 1973, 35(C9):373-377.
6. Veyssière P, Rabier J: Computations of stacking fault energies in ionic crystals. *Journal de Physique* 1974, 35(C7):97-101.
7. Veyssière P, Rabier J, Grilhé J: Stacking fault energy computations in oxides with normal and inverse spinel structure. *Physica Status Solidi (a)* 1975, 31:605-615.
8. Gaboriaud RJ, Boisson M, Rabier J, Veyssière P, Grilhé J: Computer simulations of stacking faults in ionic crystals. In: *Computer Simulation for Materials Applications.* Gaittersbug; 1976: 415-424.
9. Rabier J, Garem H, Veyssière P: Transmission electron microscopy determination of dislocation Burgers vectors in plastically deformed YIG single crystals. *Journal of Applied Physics* 1976, 47:4755-4758.
10. Rabier J, Veyssière P, Garem H, Grilhé J: Plastic deformation and related structural defects in compounds with garnet structure. *Journal de Physique* 1976, 37(C7):578-581.
11. Rabier J, Veyssière P, Grilhé J: Plastic deformation of Ni2/3Fe7/3O4 spinel ferrite single crystals. *Journal of Materials Science* 1976, 11:193-200.
12. Rabier J, Veyssière P, Grilhé J: Possibility of stacking faults and dissociation of dislocations in the garnet structure. *Physica Status Solidi (a)* 1976, 35:259-268.
13. Veyssière P, Rabier J, Garem H, Grilhé J: Sous-joints de dislocations et dissociations dans le ferrite de nickel déformé à 0.85 T_f. *Philosophical Magazine* 1976, 33:143-163.
14. Veyssière P, Rabier J, Garem H, Grilhé J: Planar defects in plastically deformed spinel single crystals. *Journal de Physique* 1976, 37(C7):586-589.
15. Rabier J, Pavis B, Rivaud G, Veyssière P: Plastic deformation and related structural defects in ferrites. *Journal de Physique* 1977, 38(C1):125-129.
16. Veyssière P, Rabier J, Grilhé J: Comment on "Deformation in spinel". *Journal of Materials Science* 1977, 12:620-621.
17. Gaboriaud RJ, Veyssière P, Rabier J, Boisson M: Plasticity of monocrystalline Yttrium Oxide (Y2O3) at 0.45 TM. *Journal of Materials Science* 1978, 13:907-908.
18. Veyssière P, Rabier J: Dislocations dans les oxydes métalliques. *Journal de Physique* 1978, 39(C2):86-97.
19. Veyssière P, Rabier J, Garem H, Grilhé J: Influence of temperature on dissociation of dislocations and plastic deformation in spinel oxides. *Philosophical Magazine A* 1978, 39:61-79.
20. Bretheau T, Castaing J, Rabier J, Veyssière P: Mouvement des dislocations et plasticité à haute température des oxydes binaires et ternaires. *Advances in Physics* 1979, 28:829-1014.

21. Pavis B, Rivaud G, Rabier J, Veyssière P: Observations de défauts dans GGG par topographie X. *Physica Status Solidi (a)* 1979, 54:K85-K89.
22. Rabier J, Veyssière P, Garem H, Grilhé J: Subgrain boundaries and dislocation dissociation in Yttrium Iron Garnet deformed at high temperatures. *Philosophical Magazine A* 1979, 39:693-708.
23. Veyssière P, Rabier J, Garem H: Transmission electron microscope observation of the {001}<110> glide system in spinel nickel ferrite deformed at room temperature. *Philosophical Magazine Letters* 1979, 39:815-819.
24. Veyssière P, Rabier J, Garem H, Grilhé J: Précipitation d'une phase de structure corindon à l'intérieur d'une matrice spinelle. *Philosophical Magazine A* 1979, 40:553-580.
25. Cadoz J, Castaing J, Veyssière P, Faivre G: Study of the motion of <1010> dislocations in (1010) in α-Al_2O_3. In: *Electron Microscopy 1980.* Edited by Brederoo P, Van Landuyt J, vol. 4; 1980: 408-411.
26. Kirby S, Veyssière P: Plastic deformation of MgO(Al_2O_3) at 0.28 T_M : preliminary results. *Philosophical Magazine A* 1980, 41:129-137.
27. Rabier J, Veyssière P, Brébec C: Cationic diffusion in YIG single crystals. In: *Ferrites 1980.* 1980: 235-239.
28. Veyssière P: Exemples de sous-structures de déformation. In: *Dislocations et déformation plastique.* Edited by Groh P, Kubin LP, Martin J-L. Paris: Editions de Physique; 1980: 41-52.
29. Veyssière P, Kirby S, Rabier J: Plastic deformation of MgO:n(Al_2O_3) spinel at temperatures below 1000°C (0.5 T_M). *Journal de Physique* 1980, 41(C6):175-178.
30. Castaing J, Veyssière P, Kubin LP, Rabier J: The plastic deformation of silicon between 300°C and 600°C. *Philosophical Magazine A* 1981, 44:1407-1413.
31. Rabier J, Veyssière P, Garem H: Dissociation of dislocations with a/2<111> Burgers vector in YIG single crystals deformed at high temperature. *Philosophical Magazine A* 1981, 44:1363-1373.
32. Garem H, Rabier J, Veyssière P: Slip systems in Gadolinium Gallium Garnet single crystals. *Journal of Materials Science* 1982, 17:878-884.
33. Kubin LP, Lépinoux J, Rabier J, Veyssière P, Fourdeux A: In-situ plastic deformation of metals and alloys in the 200 kV electron microscope. In: *Strength of Metals and Alloys.* Edited by Gikins G, vol. 2; 1982: 953-957.
34. Kubin LP, Veyssière P: In-situ straining experiments at 200 kV : description of a high temperature (1000°C) straining stage. In: *Electron Microscopy 1982.* vol. 2; 1982: 529-531.
35. Halbwachs M, Mazot P, Veyssière P, Woirgard J: Composition dependence of internal friction spectra in the MgAl2O4-Al2O3 spinel system. *Radiation Effects* 1983, 74:173-182.
36. Rabier J, Veyssière P, Demenet J-L: Plastic deformation of silicon at low temperature and the influence of doping. *Journal de Physique* 1983, 44(C4):243-253.
37. Veyssière P: Dislocation structure in non-stoichiometric oxides. *Radiation Effects* 1983, 74:1-15.
38. Veyssière P, Soullard J: Temperature dependence of hardening by tetragonal distorsions : divalent impurity doped ionic crystals. *Acta Metallurgica* 1983, 31:1177-1186.
39. Demenet J-L, Desoyer J-C, Rabier J, Veyssière P: On the plasticity of silicon below 650°C. *Scripta Metallurgica* 1984, 18:41-45.
40. Veyssière P: Weak-beam study of dislocations moving on {100} planes at 800°C in Ni_3Al. *Philosophical Magazine A* 1984, 50:189-203.

41. Veyssière P, Guan DL, Rabier J: Weak-beam observation of dissociated dislocations in an $L1_2$ ordered alloy deformed at the temperature. *Philosophical Magazine A* 1984, 49:45-54.
42. Veyssière P, Rabier J, Demenet J-L, Castaing J: Plastic deformation of intrinsic and extrinsic silicon below 500°C. In: *Deformation of Ceramic Materials II.* Edited by Tressler R, Bradt RC, vol. 18: Plenum Press; 1984: 187-192.
43. Castaing J, Broniatowski A, Rabier J, Veyssière P: Electrical properties of silicon deformed below 350°C. In: *Defects in Semiconductors.* Edited by Kimerling LC, Parsey JM: Met. Soc. AIME; 1985: 453-456.
44. Castaing J, Veyssière P: Observation of core structures of dislocations in ceramics. In: *Defects in Insulating Crystals.* Edited by Luty F; 1985.
45. Rabier J, Garem H, Demenet J-L, Veyssière P: Plastic deformation of GaAs single crystals at room temperature and the influence of doping. *Revue de Physique Appliquée* 1985, 20:805-811.
46. Veyssière P, Douin J: Dislocations with <100> Burgers vectors in Ni_3Al. *Philosophical Magazine A* 1985, 51:L1-L4.
47. Veyssière P, Douin J, Beauchamp P: On the presence of superlattice intrinsic stacking faults in plastically deformed Ni_3Al. *Philosophical Magazine A* 1985, 51:469-483.
48. Veyssière P, Rabier J, Jaulin M, Demenet J-L, Castaing J: Instrumental modifications for compressive testing under hydrostatic confining pressure. *Revue de Physique Appliquée* 1985, 20:805-811.
49. Douin J, Veyssière P, Beauchamp P: Dislocation line stability in Ni_3Al. *Philosophical Magazine A* 1986, 54:375-393.
50. Hug G, Loiseau A, Veyssière P: Dislocation fine structure in strained TiAl. *Journal of Electron Microscopy* 1986, 35:1575-1576.
51. Veyssière P, Castaing J: Dislocations at low temperature in brittle materials. In: *Electron Microscopy 1986.* Edited by America EMSo. San Francisco: San Francisco Press; 1986: 504-507.
52. Veyssière P, Westmacott KH: In-situ observations of partial dislocation climb in Ni_3Al. *Philosophical Magazine A* 1986, 53:563-581.
53. Beauchamp P, Douin J, Veyssière P: Dependence of the antiphase boundary energy upon orientation in the $L1_2$ structure. *Philosophical Magazine A* 1987, 55:565-581.
54. Thomas M, Vassel P, Veyssière P: Dissociation of superdislocation in the intermetallic compound Ti_3Al. *Scripta Metallurgica* 1987, 21:501-506.
55. Caron P, Khan T, Veyssière P: On precipitate shearing by superlattice dislocations in superalloys. *Philosophical Magazine A* 1988, 57:859-875.
56. Douin J, Beauchamp P, Veyssière P: Climb dissociation on {310} planes in nearly-stoichiometric Ni_3Al. *Philosophical Magazine A* 1988, 58:923-935.
57. Hug G, Loiseau A, Veyssière P: Weak-beam observation of a slip transition in TiAl. *Philosophical Magazine A* 1988, 57:499-523.
58. Hug G, Loiseau A, Veyssière P: Dislocations in TiAl. *Revue de Physique Appliquée* 1988, 23:673-677.
59. Thomas M, Vassel P, Veyssière P: Transmission electron microscope observations of deformation mechanisms in Ti_3Al. In: *Titane.* Edited by Lacombe P, Tricot R, Béranger G. Paris: Société Française de Métallurgie; 1988: 1085-1090.
60. Veyssière P: Dislocation core effects in plasticity. *Revue de Physique Appliquée* 1988, 23:431-443.
61. Veyssière P, Carter CB: Low temperature dissociation in $MgAl_2O_4$. *Philosophical Magazine Letters* 1988, 57:211-220.

62. Veyssière P, Horton JA, Yoo MH, Liu CT: APB dragging in Ni_3Al deformed at intermediate temperature. *Philosophical Magazine Letters* 1988, 57:17-23.
63. Caron P, Khan T, Veyssière P: {110} slip in Ni_3Al crept at 750°C along [001]. *Philosophical Magazine A* 1989, 60:267-281.
64. Dirras G, Beauchamp P, Veyssière P: A weak-beam study of the microstructure of β-CuZn deformed in the domain of flow stress anomaly. In: *High Temperature Ordered Intermetallic Alloys III.* Edited by Koch CC, Liu CT, Stoloff NS, Taub AI, vol. 133. Pittsburg: Mater. Res. Soc.; 1989: 737-742.
65. Ehhrhart I, Thomas M, Vassel P, Veyssière P: Surface defects in as-grown Ti_3Al +V. *Revue de Physique Appliquée* 1989, 24:699-709.
66. Hug G, Douin J, Veyssière P: Surface energies of planar defects and dislocation processes in Al_3Ti and TiAl. In: *High Temperature Ordered Intermetallic Alloys III.* Edited by Koch CC, Liu CT, Stoloff NS, Taub AI, vol. 133. Pittsburg: Mater. Res. Soc.; 1989: 125-130.
67. Hug G, Veyssière P: TEM investigation of dislocations substructures and microtwins in manganese-doped TiAl. In: *Electron Microscopy in Plasticity and Fracture Research of Materials.* Edited by Appel F, Messerschmidt U, Heydenreich J, Schmidt V. Berlin: Akademie Verlag; 1989: 451-458.
68. Thomas M, Vassel P, Veyssière P: c-slip in Ti_3Al. *Philosophical Magazine A* 1989, 59:1013-1026.
69. Veyssière P: TEM observation of dislocation in ordered intermetallic alloys and the flow stress anomaly. In: *High Temperature Ordered Intermetallic Alloys III.* Edited by Koch CC, Liu CT, Stoloff NS, Taub AI, vol. 133. Pittsburg: Mater. Res. Soc.; 1989: 175-188.
70. Veyssière P, Horton JA, Yoo MH, Liu CT: Temperature effect on superdislocation dissociation on a cube plane in Ni_3Al. *Philosophical Magazine Letters* 1989, 59:61-68.
71. Bontemps C, Veyssière P: The geometrical configuration of kinks on screw superdislocations in Ni_3Al deformed at room temperature. *Philosophical Magazine Letters* 1990, 61:259-267.
72. Bontemps C, Veyssière P, Saada G: Surface conditions and the 0.2% flow stress in Ni_3Al single crystals. *Scripta Metallurgica et Materialia* 1990, 4:2385-2390.
73. Khan T, Naka S, Veyssière P, Costa P: Intermetallics for structural applications. In: *High Temperature Materials for Power Engineering.* Edited by Bachelet E, Brunetaud R, Coutsomardis D, Esslinger P, Ewald J, Kvenres I, Lindblom Y, Mendowcraft DB, Regis V, Scarlin RB *et al*. Dordrecht, Nederlands: Kluwer Academic Publishers; 1990: 1533-1558.
74. Veyssière P: The fine structure of dislocations and their mobility in ordered intermetallic alloys. In: *Advanced Materials and Processes.* Edited by Exner HE, Schumacher V. Berlin: DGM Informationgesellschaft; 1990: 469-474.
75. Veyssière P, Hug G: The use of weak-beam dark-field TEM in the analysis of defects in intermetallics. In: *XIIth International Congress for Electron Microscopy.* Edited by Bailey E, vol. 1. San Francisco: San Francisco Press; 1990: 450-451.
76. Douin J, Veyssière P: On the effect of deviation from stoichiometry on the deformation microstructure of binary Ni_3Al. *Philosophical Magazine A* 1991, 64:807-817.
77. Oliver J, Veyssière P: Radiation-induced helical dislocations in Co_3Ti. *Philosophical Magazine Letters* 1991, 63:141-151.
78. Saada G, Veyssière P: Kink mobility and the flow stress behaviour of $L1_2$ alloys. *Philosophical Magazine Letters* 1991, 64:364-374.

79. Veyssière P: Weak-beam transmission electron microscopy analysis of dislocations processes in intermetallics. *ISIJ International* 1991, 31:1028-1047.
80. Veyssière P: Dislocation dissociation and plasticity in intermetallics. In: *Intermetallic compounds - structure and mechanical properties.* The Japan Institute of Metals; 1991: 745-752.
81. Veyssière P: Properties of surface defects in intermetallics. In: *Ordered Intermetalllics : Physical Metallurgy and Mechanical Behaviour.* Edited by Liu CT, Cahn RW, Sauthoff G, vol. 213: Kluwer Academic Publishers; 1991: 165-177.
82. Beauchamp P, Dirras G, Veyssière P: Calculation of antiphase boundaries on {110} planes in a B2 ordered compound by the cluster variation method. *Philosophical Magazine A* 1992, 65:477-496.
83. Dirras G, Beauchamp P, Veyssière P: Dislocation spreading and the flow stress anomaly in β-CuZn. *Philosophical Magazine A* 1992, 65:815-828.
84. François A, Hug G, Veyssière P: The fine structure of dislocations in Ni_3V. *Philosophical Magazine A* 1992, 66:269-288.
85. Saada G, Veyssière P: The dissociation of a screw superdislocation in the $L1_2$ structure. *Philosophical Magazine A* 1992, 66:1080-1103.
86. Saada G, Veyssière P: The dissociation of a screw superdislocation in the B2 structure. *Physica Status Solidi (b)* 1992, 172:309-323.
87. Saada G, Veyssière P: The mobility of a screw dislocation in a $L1_2$ alloy. In: *Strength of Materials and Alloys.* Edited by Oikawa; 1992: 117.
88. Veyssière P, Morris DG: Comment on 'TEM of dislocation structure in iron-doped Al3Ti with the $L1_2$ structure. *Philosophical Magazine Letters* 1992, 66:491-495.
89. Veyssière P, Noebe RD: Weak-beam study of <111> superlattice dislocations in NiAl. *Philosophical Magazine A* 1992, 65:1-13.
90. Saada G, Veyssière P: The peak of flow stress anomaly in the $L1_2$ structure and the elimination of Kear-Wilsdorf locks. *Materials Science and Engineering* 1993, A164:281-285.
91. Saada G, Veyssière P: Kear-Wilsdorf locks and the mechanical properties of $L1_2$ alloys. In: *High-Temperature Ordered Intermetallic Alloys V.* Edited by Baker I, Darolia R, Whittenberger JD, Yoo MH, vol. 288. Pittsburg, PA: Materials Research Society; 1993: 411-416.
92. Saada G, Veyssière P: Dislocations and atypical mechanical properties of intermetallic alloys. In: *Structural Intermetallics.* Edited by Darolia R, Lewandowski JJ, Liu CT, Martin PL, Miracle DB, Nathal MV. Warrendale, PA: TMS; 1993: 379-391.
93. Veyssière P, Douin J: Dislocations. In: *Intermetallic Compounds : Principles and Practice.* Edited by Westbrook J, Fleischer RL, vol. 1. Chichester: John Wiley & Sons, Ltd.; 1993: 519-588.
94. Dirras G, Beauchamp P, Veyssière P: Role of experimental conditions on the high temperature deformation microstructure of β-CuZn. *Scripta Metallurgica et Materialia* 1994, 31:21-24.
95. François A, Veyssière P: A TEM investigation of the deformation microstructure of CoZr and $Co_{40}Ni_{10}Zr_{40}$ ordered alloys. *Intermetallics* 1994, 2:9-22.
96. Korner A, Veyssière P: The fine structure of superdislocations in Ni_3(Al, Hf) deformed at 4.2K. In: *Electron Microscopy 1994.* Edited by Jouffrey B, Colliex C, vol. 2A; 1994: 77-78.
97. Monier C, Bertrand C, Dallas J-P, Trichet M-F, Cornet M, Veyssière P: TEM analysis of the early stages of damage in a γ/γ' Ni-based alloy under low cycle fatigue. *Materials Science and Engineering* 1994, A188:133-139.

98. Monier C, Cornet M, Veyssière P: Evolution of the slip mode with temperature in fatigued Ni15%at.Al γ/γ' single crystals. *Solid State Phenomena* 1994, 35-36:467-472.
99. Saada G, Veyssière P: The mobility of a screw dislocation in a $L1_2$ alloy. In: *Strength of Materials.* Edited by Oikawa: The Japan Institute of Metals; 1994: 117.
100. Saada G, Veyssière P: Motion under stress of a screw superdislocation in the $L1_2$ structure. *Philosophical Magazine A* 1994, 70:925-942.
101. Veyssière P: Defects and deformation microstructures. In: *Electron Microscopy 1994.* Edited by Jouffrey B, Colliex C, vol. 2A; 1994: 3-6.
102. Douin J, Veyssière P, Kumar S: Dislocations structure in $L1_2$ Mn-stabilized Al_3Ti deformed between 77K and 873K. *Materials Science and Engineering* 1995, A192-193:92-96.
103. Douin J, Veyssière P, Kumar S: Dislocation structure in $L1_2$ $(AlMn)_3Ti$. *Materials Science and Engineering* 1995, A192-193:92-96.
104. Saada G, Shi X, Veyssière P: The mechanics of cross-slip in $L1_2$ alloys. In: *High-Temperature Ordered Intermetallic Alloys VI.* Edited by Horton JA, Baker I, Hanada S, Noebe RD, Schwartz DS, vol. 364. Pittsburgh, PA: Materials Research Society; 1995: 29-34.
105. Shi X, Saada G, Veyssière P: The annihilation of superdislocations in Ni_3Al during deformation at room temperature. *Philosophical Magazine Letters* 1995, 71(1):1-9.
106. Shi X, Saada G, Veyssière P: Dislocation annihilation in $L1_2$ alloys. In: *High-Temperature Ordered Intermetallic Alloys VI.* Edited by Horton JA, Baker I, Hanada S, Noebe RD, Schwartz DS, vol. 364. Pittsburgh, PA: Materials Research Society; 1995: 701-706.
107. Veyssière P, Horton JA: Some unusual properties of the fine structure of dislocations in Ni_3Al deformed at high temperature. In: *High-Temperature Ordered Intermetallic Alloys VI.* Edited by Horton JA, Baker I, Hanada S, Noebe RD, Schwartz DS, vol. 364. Pittsburgh, PA: Materials Research Society; 1995: 339-334.
108. Hug G, Veyssière P: On elongated stacking fault loops in TiAl. In: *Gamma titanium aluminides.* Edited by Kim Y-W, Wagner R, Yamaguchi M. Warrendale: TMS; 1996: 291-298.
109. Saada G, Devincre B, Veyssière P: Mechanical properties of $L1_2$ alloys. In: *Microstructures and Functions of Materials.* Edited by Igata N, Hiki Y, Yoshida I, S. S: Igata Science; 1996: 213-219.
110. Shi X, Saada G, Veyssière P: The effect of prestraining temperature on the mechanical behaviour of $Ni_3(Al,Hf)$ single crystals. *Philosophical Magazine A* 1996, 73(5):1419-1438.
111. Shi X, Saada G, Veyssière P: The formation of APB tubes in Ni_3Al. *Philosophical Magazine A* 1996, 73(4):1159-1171.
112. Veyssière P: Dislocations and the Plasticity of Solids. In: *Stability of Materials.* Edited by Gonis A, Turchi PEA, Kudrnovky J, vol. 365. New York: Plenum Press; 1996: 509-546.
113. Veyssière P: Dislocation core structure in intermetallics and its implications in plasticity. In: *Advances in Physical Metallurgy.* Edited by Banerjee S, Ramanujan RV. Amsterdam: Gordon & Breach; 1996: 248-259.
114. Veyssière P: Dislocations in ordered alloys. In: *Adavanced Materials and Technologies.* vol. 1. Pilsen: Skoda Research; 1996: 63.
115. Veyssière P: The dislocation organisation and the anomalous mechanical behaviour in $L1_2$ alloys. In: *Inst Phys Conf Ser.* vol. 147; 1996: 445.
116. Veyssière P: The flow stress anomaly of $L1_2$ alloys : mechanical properties. *Journal de Physique IV* 1996, 6(C2):185-188.

117. Veyssière P, Saada G: Microscopy and Plasticity of the $L1_2$ γ' phase. In: *Dislocations in Solids.* Edited by Nabarro FRN, Duesbery MS, vol. 10. Amsterdam: Elsevier; 1996: 255-441.
118. Devincre B, Veyssière P, Kubin LP, Saada G: A simulation of dislocation dynamics and of the flow stress anomaly in $L1_2$ alloys. *Philosophical Magazine A* 1997, 75(5):1263-1286.
119. Devincre B, Veyssière P, Kubin LP, Saada G: Modelling of the dislocation dynamics in Ni_3Al and the flow stress anomaly. In: *High-Temperature Ordered Intermetallic Alloys VII.* Edited by Koch CC, Liu CT, Stoloff NS, Wanner A, vol. 460. Pittsburgh, PA: Materials Research Society; 1997: 535-540.
120. Veyssière P: An analysis of the slip of screw dislocations in $L1_2$ alloys. In: *High-Temperature Ordered Intermetallic Alloys VII.* Edited by Koch CC, Liu CT, Stoloff NS, Wanner A, vol. 460. Pittsburgh, PA: Materials Research Society; 1997: 541-548.
121. Douin J, Veyssière P, Saada G: Comparison between simulated weak-beam images: application to the extinction criterion in elastically anisotropic crystals. *Philosophical Magazine A* 1998, 77(5):1323-1340.
122. Grégori F, Diot C, Ochin T, Douin J, Veyssière P: An X-ray method to orientate TiAl single crystals. *Intermetallics* 1998, 6:71-74.
123. Grégori F, Veyssière P: Striation contrast in Al-rich γ-TiAl containing short-range order. In: *Electron Microscopy 98.* Edited by Calderon Benavides HA, Yacaman MJ, vol. II, ICEM 14, Cancun, Mexico, aug 31-sept 4 1998 edn. Bristol: Institute of Physics; 1998: 47-48.
124. Veyssière P: The mechanical anomaly of $L1_2$ alloys : a review of recent experiments and models. *Intermetallics* 1998, 6:587-592.
125. Devincre B, Veyssière P, Saada G: Simulation of the plastic flow in Ni_3Al: work hardening and strain-rate sensitivity. *Philosophical Magazine A* 1999, 79(5):1609-1627.
126. Grégori F, Veyssière P: Planar debris in plastically deformed Al-rich γ-TiAl. *Philosophical Magazine A* 1999, 79:403.
127. Grégori F, Veyssière P: Properties of ordinary dislocations in Al-rich γ-TiAl single crystals deformed in single slip. In: *Gamma Titanium Aluminides.* Edited by Kim Y-W, Dimiduk DM, Loretto MH. Warrendale: Minerals, Metals & Materials Society; 1999: 75-82.
128. Grégori F, Veyssière P: Microstructures in Al-rich γ-TiAl strained in the domain of temperature of flow stress anomaly. *Bulletin Materials Society* 1999, 22:585.
129. Veyssière P: Dislocations and the Plasticity of Crystals. In: *Mechanics and Materials: Fundamentals and Linkages.* Edited by Meyers MA, Armstrong RW, Kirchner HOK. Chichester: John Wiley & Sons, Inc.; 1999: 271-362.
130. Grégori F, Veyssière P: Properties of <011]{111} slip in Al-rich γ-TiAl. I Dissociation, locking and decomposition of <011] dislocations at room temperature. *Philosophical Magazine A* 2000, 80(12):2913-2932.
131. Grégori F, Veyssière P: Properties of <011]{111} slip in Al-rich γ-TiAl. II. The formation of faulted dipoles. *Philosophical Magazine A* 2000, 80(12):2933-2955.
132. Grégori F, Veyssière P: Properties of the deformation microstructure in Al-rich γ-TiAl deformed by ordinary dislocations. In: *Multiscale Phenomena in Materials - Experiments and Modeling.* Edited by Robertson IM, Lassila DH, Devincre B, Phillips R, vol. 578. Warrendale, PA: MRS; 2000: 187-192.
133. Grégori F, Veyssière P: Deformation of Al-rich γ-TiAl by <011] dislocations over the domain of flow stress anomaly. In: *Multiscale Phenomena in Materials - Experiments*

and Modeling. Edited by Robertson IM, Lassila DH, Devincre B, Phillips R, vol. 578. Warrendale, PA: MRS; 2000: 195-198.
134. Grégori F, Penhoud P, Veyssière P: Extrinsic factors influencing the yield stress anomaly behaviour of Al-rich γ-TiAl. *Philosophical Magazine A* 2001, 81(3):529-542.
135. Grégori F, Penhoud P, Veyssière P: Effects of a pre-anneal on the mechanical response of Al-rich γ-TiAl. In: *High Temperature Ordered Intermetallics IX*. Edited by Schneibel JH, Noebe RD, Hanada S, Hemker KJ, Sauthoff G, vol. 646. Warrendale, PA: MRS; 2001: N7.4.1-N7.4.6.
136. Grégori F, Veyssière P: A microstructural analysis of Al-rich γ–TiAl deformed by <011] dislocations. *Materials Science and Engineering* 2001, A309-310:87-91.
137. Grégori F, Veyssière P: The generation of stacking fault dipoles and dislocation activity in γ-TiAl. In: *High Temperature Ordered Intermetallics IX*. Edited by Schneibel JH, Noebe RD, Hanada S, Hemker KJ, Sauthoff G, vol. 646. Warrendale, PA: MRS; 2001: N 5.45.41-N 45.45.46.
138. Grégori F, Veyssière P: Mechanisms contributing to the pinning of ordinary dislocations in γ-TiAl. In: *High Temperature Ordered Intermetallics IX*. Edited by Schneibel JH, Noebe RD, Hanada S, Hemker KJ, Sauthoff G, vol. 646. Warrendale, PA: MRS; 2001: N7.11.11-N17.11.16.
139. Veyssière P: Yield stress anomalies in ordered alloys: a review of microstructural findings and related hypotheses. *Materials Science and Engineering* 2001, A309-310:44-48.
140. Veyssière P: The annihilation by glide of prismatic loops in walls. *Philosophical Magazine Letters* 2001, 81(11):733-741.
141. Veyssière P, Grégori F: Conservative formation of prismatic loop alignments in crystals deformed in single slip. *Philosophical Magazine Letters* 2001, 81(12):795.
142. Veyssière P, Grégori F: Dislocation patterning and conservative recovery in single slip. In: *Materials instabilities and patterning in metals.* Edited by Zbib HM, Campbell GH, Hughes DA, Levine LE, Victoria M, vol. 683E. Warrendale, PA: MRS; 2001: BB 5.2.1-BB 5.2.6.
143. Grégori F, Veyssière P: Properties of <110]{111} slip in Al-rich g-TiAl deformed at room temperature. I Transmission electron microscope analysis of deformation debris. *Philosophical Magazine A* 2002, 82(3):553-566.
144. Grégori F, Veyssière P: The mechanical generation of planar interfaces and dislocation walls in Al-rich γ-TiAl. *Annales de Chimie - Science des Matériaux* 2002, 27(Suppl. 1):S139-S148.
145. Martinetto P, Castaing J, Walter P, Penhoud P, Veyssière P: Structure of milled galena (PbS) particles as a result of grinding: Observations by electron microscopy. *Journal of Materials Research* 2002, 17(7):1601-1611.
146. Saada G, Veyssière P: Work Hardening of Face Centred Cubic Crystals. Dislocation Intersection and Cross Slip. In: *Dislocations in Solids.* Edited by Nabarro FRN, Duesbery MS, Hirth JP, vol. 11. Amsterdam: Elsevier Science; 2002: 413-458.
147. Veyssière P, Grégori F: Properties of <110]{111} slip in Al-rich g-TiAl deformed at room temperature. II The formation and the role of strings of prismatic loops during deformation. *Philosophical Magazine A* 2002, 82(3):567-577.
148. Veyssière P, Grégori F: Properties of <110]{111} slip in Al-rich g-TiAl deformed at room temperature. III The role of loop strings in dislocation pinning and in dislocation patterning. *Philosophical Magazine A* 2002, 82(3):579-590.
149. Chiu Y-L, Grégori F, Nakano T, Umakoshi Y, Veyssière P: The nucleation of faulted dipoles at intersection jogs in γ-TiAl. *Philosophical Magazine A* 2003, 83(11):1347-1363.

150. Chiu Y-L, Inui H, Nakano T, Veyssière P: The dependence of faulted dipole density on load orientation in γ-TiAl. *Philosophical Magazine Letters* 2003, 83:485-493.
151. Chiu Y-L, Veyssière P: Kear-Wilsdorf locks and the generation of APB tubes in L12 alloys. *Philosophical Magazine A* 2003, 83:179-202.
152. Couret A, Calderon Benavides HA, Veyssière P: Intralamellar dislocation networks formed by glide in g-TiAl I. The mechanism of formation. *Philosophical Magazine A* 2003, 83(14):1699-1718.
153. Veyssière P: Dislocation organization under stress. In: *Thermodynamics, Microstructures and Plasticity.* Edited by Finel A, Veron M, Mazière D, vol. 108. Dordrecht: Kluwer Academic Publishers; 2003: 497-506.
154. Veyssière P, Chiu Y-L, Grégori F: Micromechanisms of deformation in γ-TiAl. In: *Defect Properties an Related Phenomena in Intermetallics Alloys.* Edited by George EP, Inui H, Mills MJ, Eggeler G, vol. 753. Warrendale: MRS; 2003: BB4.1.1-BB4.1.6.
155. Veyssière P, Chiu Y-L, Grégori F: Dislocation patterning and recovery under single slip: modelling micromechanisms from observations. In: *Multiscale Phenomena in Materials--Experiments and Modeling Related to Mechanical Behavior*. Edited by Zbib HM, Lassila DH, Levine LE, Hemker KJ, vol. 779. Warendale: MRS; 2003: W1.4.1-1.4.15.
156. Chiu Y-L, Grégori F, Inui H, Veyssière P: Twin-transformed lattice defects in γ-TiAl. *Philosophical Magazine* 2004, 84(30):3235-3250.
157. Deeb C, Castaing J, Walter P, Penhoud P, Veyssière P, Martinetto P: Dislocations in Milled galena (PbS). *Metallurgical and Materials Transactions A* 2004, 35A(august):2223-2228.
158. Deeb C, Walter P, Castaing J, Penhoud P, Veyssière P: Transmission electron microscopy (TEM) investigations of ancient Egyptian cosmetic powders. *Applied Physics A* 2004, 79:393-396.
159. Molénat G, Couret A, Sundararaman M, Singh JB, Saada G, Veyssière P: The Correlation of Slip between Adjacent Lamellae in TiAl. In: *Integrative and Interdisciplinary Aspects of Intermetallic.* Edited by Mills MJ, Inui H, Clemens H, Fu CL, vol. 842. Warrendale: MRS; 2005: S6.6.1-S6.6.6.
160. Nakano T, Hayashi K, Umakoshi Y, Chiu Y-L, Veyssière P: Effects of Al concentration and resulting long-period superstructures on the plastic properties at room temperature of Al-rich TiAl single crystals. *Philosophical Magazine* 2005, 85(22):2527-2548.
161. Singh JB, Molénat G, Sundararaman M, Banerjee S, Saada G, Veyssière P, Couret A: The activation and the spreading of deformation in a fully lamellar Ti-47Al-1Cr-0.2Si Alloy. *Philosophical Magazine* 2006, 86:In press.
162. Singh JB, Molénat G, Sundararaman M, Banerjee S, Saada G, Veyssière P, Couret A: In situ straining investigation of slip transfer across α2 lamellae at room temperature in a lamellar TiAl alloy. *Philosophical Magazine Letters* 2006, 86:in press.
163. Veyssière P: The weak-beam technique applied to the analysis of materials properties. *Journal of Materials Science* 2006:in press.
164. Veyssière P, Chiu Y-L, Niewczas M: Dislocation micromechanisms under single slip conditions. *Zeitschrift für Metallkunde* 2006(in press).