

PUBLICATIONS

A. EDITED WORKS AND BOOK CHAPTERS

(a) Government Reports

1. Committee on Smaller Facilities: R. Sinclair (chair), A. Aprahamian, A. I. Bienenstock, J. P. Bradley, D. R. Clarke, J. W. Davenport, F. J. DiSalvo, C. A. Evans, Jr., W. P. Lowe, F. M. Ross, D. J. Smith, J. M. Soures, L. Spicer, D. M. Tennant. National Research Council of the National Academy of Sciences. *Midsized Facilities: the Infrastructure for Materials Research*. Washington: National Academies Press, pp. 1-230 2006.

(b) Edited Works

1. "Report of Workshop on High Resolution Electron Microscopy," edited by G. Thomas, R. M. Glaeser, J. M. Cowley and R. Sinclair (Lawrence Berkeley Laboratory, Special Publication #106, 1976).
2. "Characterization of Defects in Materials", edited by R. W. Siegel, J. R. Weertman and R. Sinclair, *Mat. Res. Soc. Symp. Proc.* **82**, pp. 1-532 (1987).
3. "High Resolution Electron Microscopy of Defects in Materials", edited by R. Sinclair, D. J. Smith and U. Dahmen, *Mat. Res. Soc. Symp. Proc.* **183**, pp. 1-391 (1990).
4. "Polycrystalline Thin Films-Structure, Texture, Properties and Applications", edited by K. Barmak, M. A. Parker, J. F. Floro, R. Sinclair and D. A. Smith, *Mat. Res. Soc. Symp. Proc.* **343**, pp. 1-769 (1994).
5. "*In Situ* Electron and Tunneling Microscopy of Dynamic Processes", edited by R. Sharma, P. L. Gai, M. Gajdardziska-Josifovska, L. J. Whitman and R. Sinclair, *Mat. Res. Soc. Symp. Proc.* **404**, pp. 1-226 (1996).

(c) Book Chapters

1. "Direct Observation and Characterization of Lattice Defects in Materials," R. Sinclair, in *Treatise on Materials Science and Technology*, Volume 11, edited by R. K. McCrone (Academic Press, New York, 1977) pp. 1-45.
2. "Microanalysis by Lattice Imaging," R. Sinclair, in *Analytical Electron Microscopy*, edited by J. J. Hren, J. I. Goldstein and D. C. Joy (Plenum Press, New York, 1979) pp. 507-534.
3. "Recent Developments in Lattice Imaging of Materials", R. Sinclair, in *Annual Reviews of Materials Science*, Volume 11, edited by R. A. Huggins (Annual Reviews, Inc., Palo Alto, California, 1981) pp. 427-439.
4. "High Resolution Electron Microscopy", R. Sinclair, in *Quantitative Electron Microscopy*, edited by J.N. Chapman and A.J. Craven (SUSSP Publications, Edinburgh, 1984) pp. 341-350.
5. "Electron Microscope", R. Sinclair, in *1987 Yearbook of Science and Technology*, (McGraw-Hill, New York, 1986) pp. 173-176.
6. "Thermochemical Properties and Phase Diagrams", R. Sinclair, R. Madar and M. Setton, in *Properties of Metal Silicides*, edited by K. Maex and M. van Rossum (Inst. Elec. Eng'rs, London, 1995), pp. 95 - 152.
7. "A Brief History of Controlled Atmosphere Transmission Electron Microscopy", A. L. Koh, S. C. Lee and R. Sinclair, in: *Controlled Atmosphere Transmission Electron Microscopy – Principles and Practices*, edited by T. W. Hansen and J. B. Wagner (Springer Publishing Company, 2016), pp. 3-43.

B. JOURNAL PUBLICATIONS (refereed)

1. "Structural Studies on the Ni-Ni₃Ti System", R. Sinclair, Ph.D. Thesis, University of Cambridge, England (1972).
2. "Measurement of Relative Bond Energies in Some Ordered Nickel-Based Alloys by Field-Ion Microscopy", R.J. Taunt, R. Sinclair and B. Ralph, *Phys. Status Solidi A*, **16**, pp. 469-484 (1973).
3. "On the Determination of a Local Order Parameter in a Nickel-Titanium Alloy", R. Sinclair, B. Ralph and J.A. Leake, *Philos. Mag.*, **28**, pp. 1111-1123 (1973).
4. "Spinodal Decomposition of a Nickel-Titanium Alloy", R. Sinclair, J.A. Leake and B. Ralph, *Phys. Status Solidi A*, **26**, pp. 285-298 (1974).
5. "Antiphase Domains and Diffraction Spot Splitting in Cu₃Au", R. Sinclair and G. Thomas, *J. Appl. Crystallography*, **8**, pp. 206-211 (1975).
6. "On the Lattice Parameter of Non-Random Solid Solutions", A. Krawitz and R. Sinclair, *Philos. Mag.*, **31**, pp. 697-712 (1975).

7. "Analysis of Ordering in Cu_3Au , Utilizing Lattice Imaging Techniques", R. Sinclair, K. Schneider and G. Thomas, *Acta Metall.*, **23**, pp. 873-883 (1975).
8. "Applications of the Critical Voltage Effect for the Study of Ordering", R. Sinclair, M.J. Goringe and G. Thomas, *Philos. Mag.*, **32**, pp. 501-512 (1975).
9. "Optical Diffraction from Lattice Images of Alloys", R. Sinclair, R. Gronsky and G. Thomas, *Acta Metall.*, **24**, pp. 789-795 (1976).
10. "Observations of B19 Ordering in Mg_3Cd Thin Foils", J. Dutkiewicz and R. Sinclair, *Scripta Met.*, **10**, pp. 489-493 (1976).
11. "Discussion of An Electron Diffraction Study of Short-Range Order in Quenched Ni_4Mo Alloy", G. Thomas and R. Sinclair, *Acta Metall.*, **25**, pp. 231-234 (1977).
12. "Lattice Image Studies of B19 Ordering and Interfacial Structures in Mg_3Cd ", R. Sinclair and J. Dutkiewicz, *Acta Metall.*, **25**, pp. 235-249 (1977).
13. "The Importance of Electron Diffraction to Transmission Electron Imaging", R. Sinclair, *Trans. Am. Cryst. Soc.*, **13**, pp. 101-126 (1977).
14. "Structure of Ordered Alloys", R. Sinclair and G. Thomas, *J. Phys. (Paris)*, **38**, C7, pp. 165-171 (1977).
15. "A Preliminary Lattice Image Investigation of Nickel-Titanium Martensite", R. Sinclair, *J. Phys. (Paris)*, **38**, C7, pp. 453-456 (1977).
16. "Lattice Imaging and Optical Microanalysis of a Cu-Ni-Cr Spinodal Alloy", C. K. Wu, R. Sinclair and G. Thomas, *Met. Trans.*, **9A**, pp.381-387 (1978).
17. "Determination of Local Composition by Lattice Imaging", R. Sinclair and G. Thomas, *Met. Trans.*, **9A**, pp. 373-380 (1978).
18. "Lattice Imaging Study of a Martensite-Austenite Interface", R. Sinclair and H.A. Mohamed, *Acta Metall.*, **26**, pp. 623-628 (1978).
19. "Modulated Substitutional-Interstitial Solute-Atom Clustering in Nitrided Austenitic Fe-34 Ni-V Alloys", J.H. Driver, R. Sinclair and K.H. Jack, *Proc. R. Soc. London*, **A367**, pp. 99-115 (1978).
20. "Comments on 'The Early Stages of the Transformation in Dilute Alloys of Titanium in Nickel'", D.E. Laughlin, R. Sinclair, and L.E. Tanner, *Scripta Met.*, **14**, pp. 373-376 (1980).
21. "A Quantitative Assessment of the Capabilities of 2 1/2 D Microscopy for Analyzing Crystalline Solids", G. M. Michal and R. Sinclair, *Philos. Mag.*, **A42**, pp. 691-704 (1980).
22. "Metallurgical Applications of the 2 1/2 D TEM Technique", R. Sinclair, G.M. Michal and T. Yamashita, *Met. Trans.*, **12A**, pp. 1503-1512 (1981).
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30. "Electron Irradiation Induced Crystalline Amorphous Transitions in Ni-Ti Alloys", G. Thomas, H. Mori, H. Fujita and R. Sinclair, *Scripta Met.*, **15**, pp. 589-592 (1982).
31. "High Resolution Lattice Imaging of Cadmium Telluride", T. Yamashita, F.A. Ponce, P. Pirouz and R. Sinclair, *Philos. Mag.*, **A45**, pp. 693-711 (1982).
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38. "Defect Interactions in Deformed WC", M.K. Hibbs, R. Sinclair and D.J. Rowcliffe, *Acta Metall.*, **32**, pp. 941-947 (1984).
39. "The Preparation of Cross-Section Specimens for Transmission Electron Microscopy", J.C. Bravman and R. Sinclair, *J. Electron Microsc. Tech.*, **1**, pp. 53-61 (1984).
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