

參考文獻

- 1.Zavracky, P.M., Majumder, S., McGruer, N.E., “Micromechanical switches fabricated using nickel surface micromachining”, Journal of Micro - electromechanical Systems, Volume: 6, Issue: 1, pp. 3-9, March 1997.
- 2.D.Girbau, A. Lazaro, L. Pradell, “RF MEMS switches based on the buckle-beam thermal actuator”, Microwave Conference, 2003. 33rd European, Volume: 2, pp. 651-654, 7-9 October 2003.
- 3.Winchester, K.J., Dell, J.M., “Nano-indentation characterisation of PECVD silicon nitride films”, Optoelectronic and Microelectronic Materials and Devices, 2000 COMMAD 2000. Proceedings Conference on, 6-8, pp. 117-120, December 2000.
- 4.T. Fritz, H. S., Cho, K. J. Hemker, W. Mokwa, U. Schnakenberg, “Characterization of electroplated nickel”, Microsystem Technologies, 9, pp. 87-91, 2002.
- 5.蘇癸陽，實用電鍍理論與實際，復文書局，台北，民國八十八年。
- 6.Petersen, K.E., Guarnieri, C.R., “Young’s modulus measurements of thin films using micromechanics”, Journal of Applied Physic, 50, pp. 6761-6766, 1979.
- 7.Zhang, L.M., Uttamchandani, D., Culshaw, B., “Measurement of mechanical properties of silicon microresonators”, Sensors and Actuators A, 29, pp. 79-84, 1991.
- 8.Kiesewetter, L., Zhang, J.-M., Houdeau, D., Steckenborn, A., “Determining of Young’s moduli of micromechanical thin films using the resonance method”, Sensors and Actuators A, 35, pp. 153-159, 1992.
- 9.Vlassak, J.J., Nix, W.D. “A new bulge test technique for the determination of Young’s modulus and Poisson’s ratio of thin films”, Journal of Materials Research, 7, No.12, pp. 3242-3249, 1992.
- 10.Najafi, K., Suzuki, K., “A novel technique and structure for the measurement of intrinsic stress and Young's modulus of thin films”, Micro Electro Mechanical Systems, 1989, Proceedings, 'An Investigation of Micro Structures, Sensors, Actuators, Machines and Robots', IEEE, 20-22, pp. 96-97, February, 1989.

11. Zou, Q., Li, Z., Liu, L., “New methods for measuring mechanical properties of thin films in micromachining: beam pull-in voltage (VPI) method and long beam deflection (LBD) method”, Sensors and Actuators A, 48, pp. 137-143, 1995.
12. Osterberg, P. M., Senturia, S. D., “M-Test: A test chip for MEMS material property measurement using electrostatically actuated test structures”, Journal of Microelectromechanical systems, 6, No. 2, pp. 107-118, 1997.
13. Hirasawa, T., Kotera, H., Tawa, S., Shima, S., “A study of mechanical properties of multi-layered thin films [for MEMS]”, Intelligent Processing and Manufacturing of Materials, 1999, IPMM '99. Proceedings of the Second International Conference on, Volume: 1, 10-15, pp. 221 –226, July, 1999.
14. Sharpe, W. N. Jr., Yuan, B., Edwards, R. L., “A new technique for measuring the mechanical properties of thin films,” Journal of Microelectromechanical Systems, 6, No. 3, pp. 193-199, 1997.
15. Tsuchiya, T., Tabata, O., Sakata, J., Taga, Y., “Specimen size effect on tensile strength of surface-micromachined polycrystalline silicon thin films”, Journal of Microelectromechanical Systems, 7, No. 1, pp. 106-113, 1998.
16. 美國康乃爾大學微壓痕實驗網站。(http://www.nanoindentation.cornell.edu)
17. 蔡欣昌 (Hsin-Chang Tsai) , 「利用微機械結構萃取薄膜材料機械性質 (Characterization of mechanical properties of thin films using micromachined Structures)」, 國立清華大學博士論文動力機械工程學系, 博士論文, 民國九十二年六月。
18. Figgins, B. F., Jones, G. O., Riley, D. P., “The thermal expansion of Al at low temperature as measured by an X-ray diffraction method”, Philosophical Magazine, Series 8, Vol. 1, No. 7-12, pp. 747-758, 1956.
19. Simmons, R. O., Balluffi, R. W., “Low temperature thermal expansion of Cu”, Physical Review, 108, pp. 278-280, 1957.
20. Fang, W., Tsai, H.-C., Lo, C.-Y., “Determining thermal expansion coefficients of thin films using micromachined cantilevers”, Sensors and Actuators A, Vol. 77~78, pp. 21-27, 1999.

21. Riethmuller, W., Benecke, W., "Thermal excited silicon microactuator" , IEEE trans. Electro Dev. ED, 35, pp. 758-763, 1988.
22. Petersen, K. E., "Silicon as a mechanical material" , Proc. IEEE 70, pp. 400-457, 1982.
23. Pan, Chi Hsiang, "A test chip and step-by-step procedure for MEMS material property determination using micromachined structures", TRANSDUCERS, Solid-State Sensors, Actuators and Microsystems, 12th International Conference on, 2003, Volume: 1, 8-12, pp. 460-463, June, 2003.
24. 音喬公司鎳電鍍液成份說明資料。
25. Fischer-Cripps, Anthony C., Nanoindentation, Springer-Verlag New York Inc., New York, 2002.
26. 王大倫 譯，實用電鍍學，財團法人徐氏基金會，台北縣，民國八十七年。
27. 南台科技大學工程材料e-learning網站。
(<http://elearning.stut.edu.tw/caster/3.1.1.htm>)。
28. 周卓輝、邱永昇、孫銘成、黃彥璋、王明珊、莊祝旻，行政院國家科學委員會專題研究計畫成果報告 元件薄膜之單層及多層結構應力及熱機械性質研究，國立清華大學材料所，民國九十二年。