

List of Publications: K. Sharvan Kumar

(a) *Chapters in Books:*

1. K.S. Kumar, "ADVANCED INTERMETALLICS" - a chapter in the book *Intermetallics*. Editors: N.S. Stoloff and V.K. Sikka. Publishers: Chapman and Hall 1996, p. 392.
2. K.S. Kumar, "SILICIDES: SCIENCE, TECHNOLOGY AND APPLICATIONS" - a chapter in the two-volume book *Intermetallic Compounds: Principles and Practice*. Editors: J.H. Westbrook and R.L. Fleischer. Publishers: John Wiley and Sons 1994, p. 211.
3. J.H. Perepezko, R. Sakidja and K.S. Kumar, "Mo-Si-B ALLOYS FOR ULTRA-HIGH TEMPERATURE APPLICATIONS", a chapter in the book "**Advanced Structural Materials: Properties, Design, Optimization and Applications**", Marcel Dekker, Inc.-submitted, December 2005.

(b) *Refereed Journal Articles:*

1. R. Vasudevan and K. Sharvan Kumar, "Some Studies on the Use of Ultrasonic Vibrations in the Oil Impregnation of Porous Bearings," **Indian J. Engineers**, 19th Anniversary Number, p. 9, (1979).
2. K.S. Kumar, A. Lawley, and M.J. Koczak, "Powder Metallurgy T 15 Tool Steel: Part I. Characterization of Powder and Hot-Isostatically Pressed Material," **Metall. Trans.** 22A, p. 2733 (1991).
3. K.S. Kumar, A. Lawley, and M.J. Koczak, "Powder Metallurgy T 15 Tool Steel: Part II. Microstructures and Properties after Heat Treatment," **Metall. Trans.** 22 A, p. 2747 (1991).
4. K.S. Kumar and J.R. Pickens, "Compression Behavior of the L1₂ Intermetallic Al₂₂Fe₃Ti₈, **Scripta Metall.**, 22, p. 1015 (1988).
5. R.K. Viswanadham, S.K. Mannan and S. Kumar, "Mechanical Alloying Behavior in Group V Transition Metal/Silicon Systems," **Scripta Metall.**, 22, p. 1011 (1988).
6. R.K. Viswanadham, S.K. Mannan, K.S. Kumar, and A. Wolfenden, "Elastic Modulus of NiAl-TiB₂ Composites in the Range 300-1273K," **J. Mater. Sci. Lett.**, 8, p. 409 (1989).
7. K.S. Kumar and S.K. Mannan, "Mechanical Alloying Behavior in the Nb-Si, Ta-Si and Nb-Ta-Si Systems," in High Temperature Ordered Intermetallics III, Vol. 133, N.S. Stoloff, C.C. Koch, C.T. Liu, and A.I. Taub, eds., Materials Research Society, Pittsburgh, PA, p. 415 (1989).
8. J.D. Whittenberger, R.K. Viswanadham, S.K. Mannan, and K.S. Kumar, "1200 to 1400K Slow Strain Rate Compressive Properties of NiAl/Ni₂AlTi Base Materials," in High Temperature Ordered Intermetallics III, Vol. 133, N.S. Stoloff, C.C. Koch, C.T. Liu and A.I. Taub, eds., Materials Research Society, Pittsburgh, PA, p. 621 (1989).
9. J.D. Whittenberger, S.K. Mannan, and K.S. Kumar, "1100 to 1300K Slow Plastic Compression Properties of Ni-38-5 Al Composites," **Scripta Metall.**, 23, p. 2055, (1989).
10. J.D. Whittenberger, R.K. Viswanadham, S.K. Mannan, and K.S. Kumar, "1200 to 1400K Slow Strain Rate Compressive Behavior of NiAl/Ni₂AlTi Alloys and NiAl/Ni₂AlTi-TiB₂ Composites," **J. Mater. Res.**, 4,(5), p. 1164 (1989).
11. J.D. Whittenberger, D.J. Gaydos, and K.S. Kumar, "1300K Compressive Properties of Several Dispersion Strengthened NiAl Materials," **J. Mater. Sci.**, 25, p. 2771 (1990).
12. J.D. Whittenberger, S. Kumar, S.K. Mannan, and R.K. Viswanadham, "Slow Plastic Deformation of Extruded NiAl-10TiB₂ Particulate Composites at 1200 and 1300K," **J.**

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13. J.D. Whittenberger, K.S. Kumar and S.K. Mannan, "1000 to 1300K Slow Plastic Compression Properties of Al-Deficient NiAl," **J. Mater. Sci.** 26, p. 2015 (1991).
 14. J.D. Whittenberger, K.S. Kumar, and S.K. Mannan, "1200 and 1300K Slow Plastic Compression Properties of Ni-50Al Composites," in **Materials at High Temperatures**, 9, p 3 (1991).
 15. S.K. Mannan, K.S. Kumar, and J.D. Whittenberger, "High Temperature Slow Strain Rate Compression Studies on CoAl-TiB₂ Composites," **Metall. Trans.** 21A, p.2179 (1990).
 16. M.E. Eberhart, K.S. Kumar, and J.M. MacLaren, "An Electronic Model for the DO₂₂ to L₁₂ Transformation of the Group IV-A Trialuminides," **Philos. Mag. B**, 61(6), p.943 (1990).
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- Metals, Aoba Aramaki, Sendai, Japan, p. 927 (1991).
31. K.S. Kumar, "Discontinuously Reinforced Intermetallic Matrix Composites," **ISIJ International**, 31, p 1248 (1991).
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(c) *Other Conference Proceedings*

1. K.S. Kumar, A. Lawley, and H.W. Antes, "Thermal-Mechanical Processing of Iron Powder for High Compressibility," in the Proceedings, P/M '82 in Europe, International Powder Metallurgy Conference, Florence, Italy, June 20-25, 1982 (Associazione Italiana di Metallurgia), p.437 (1982).
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(This patent (#3) was licensed to Reynolds Metal Company, commercialized and the alloy is currently used to construct the External Fuel Tank of the Space Shuttle)