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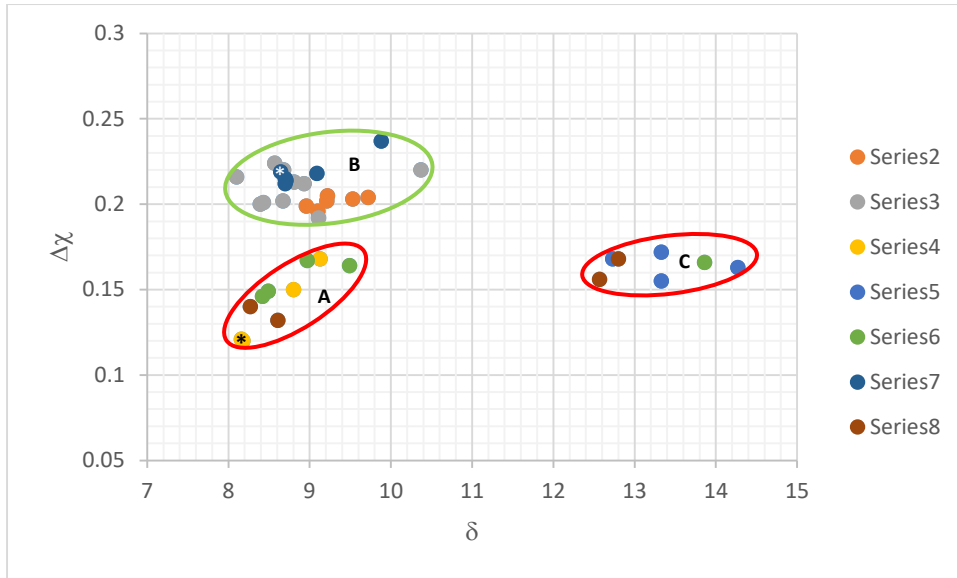


Figure 1: Plot of $\Delta\chi$ versus δ . The alloys KZ5 and YG8 (see text) are in the green (top left) and lower left red (A) ellipses, respectively. Alloys with Boron are only in the right red (C) ellipse. There are no Boron containing alloys in area B. Alloys with RMs, Al, Cr, Sn and Ge are in all three areas. The alloys KZ5 and YG8 are indicated by *. For series 2 to 8 see text.

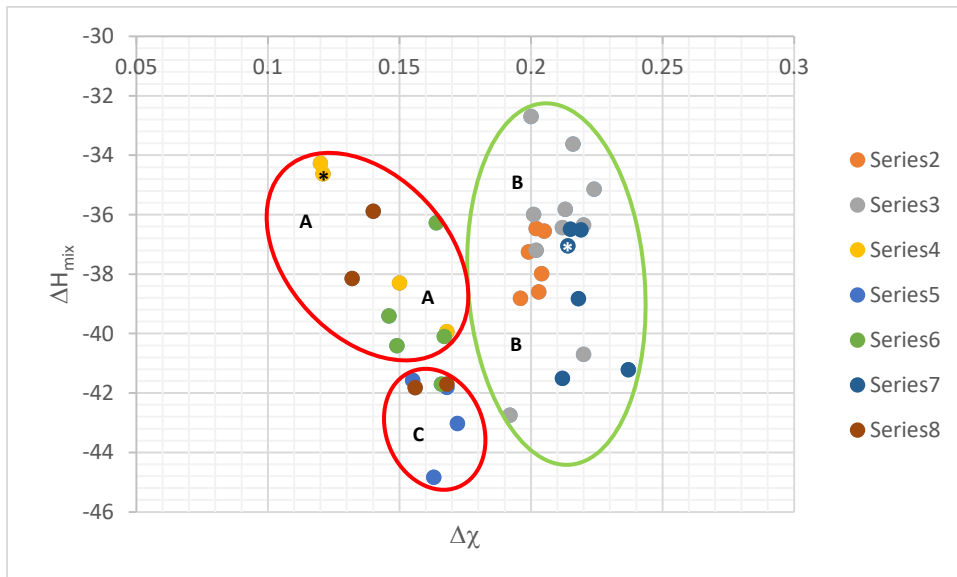


Figure 2: Plot of ΔH_{mix} versus $\Delta\chi$. The alloys KZ5 and YG8 (see text) are in the right green and upper left red (A) ellipses, respectively. Alloys with Boron are only in the lower left red (C) ellipse. There are no Boron containing alloys in area B. Alloys with RMs, Al, Cr, Sn and Ge are in all three areas. The alloys KZ5 and YG8 are indicated by *. For series 2 to 8 see text.

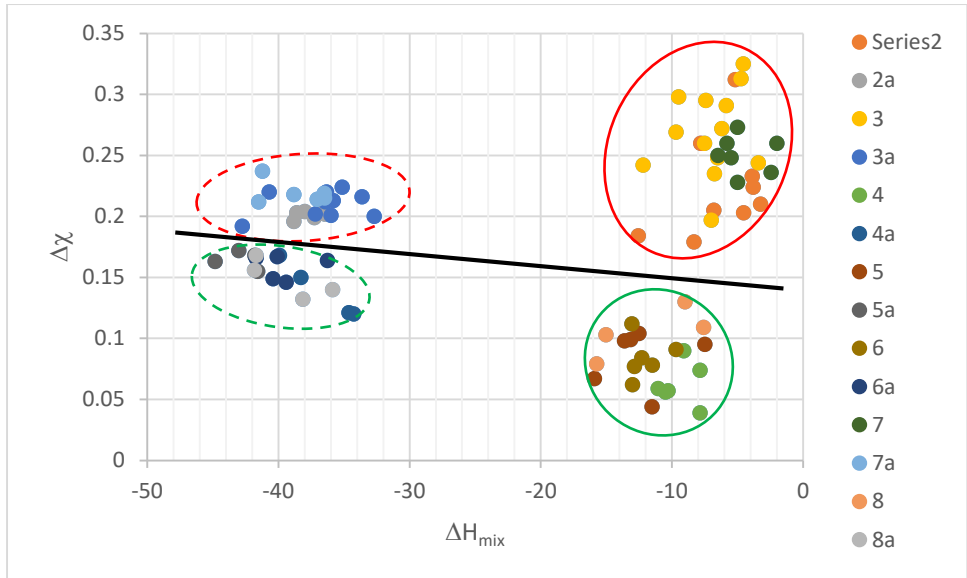


Figure 3: Plot of $\Delta\chi$ versus ΔH_{mix} for alloys and bcc Nb solid solutions. The red ellipses above the black line are for series 2, 2a, 3, 3a, 7, 7a where the alloying elements do not include Boron. The green ellipses below the black line are for series 4, 4a, 5, 5a, 6, 6a, 8, 8a and include data for alloys and bcc Nb solid solutions with Boron. The dashed ellipses are for the alloys and the full ones for the Nb_{ss} solid solutions. The black line separates alloys without Boron (upper ellipses) from alloys with all other alloying elements including Boron (lower ellipses). For description of series 2 to 8 and 2a to 8a see text.

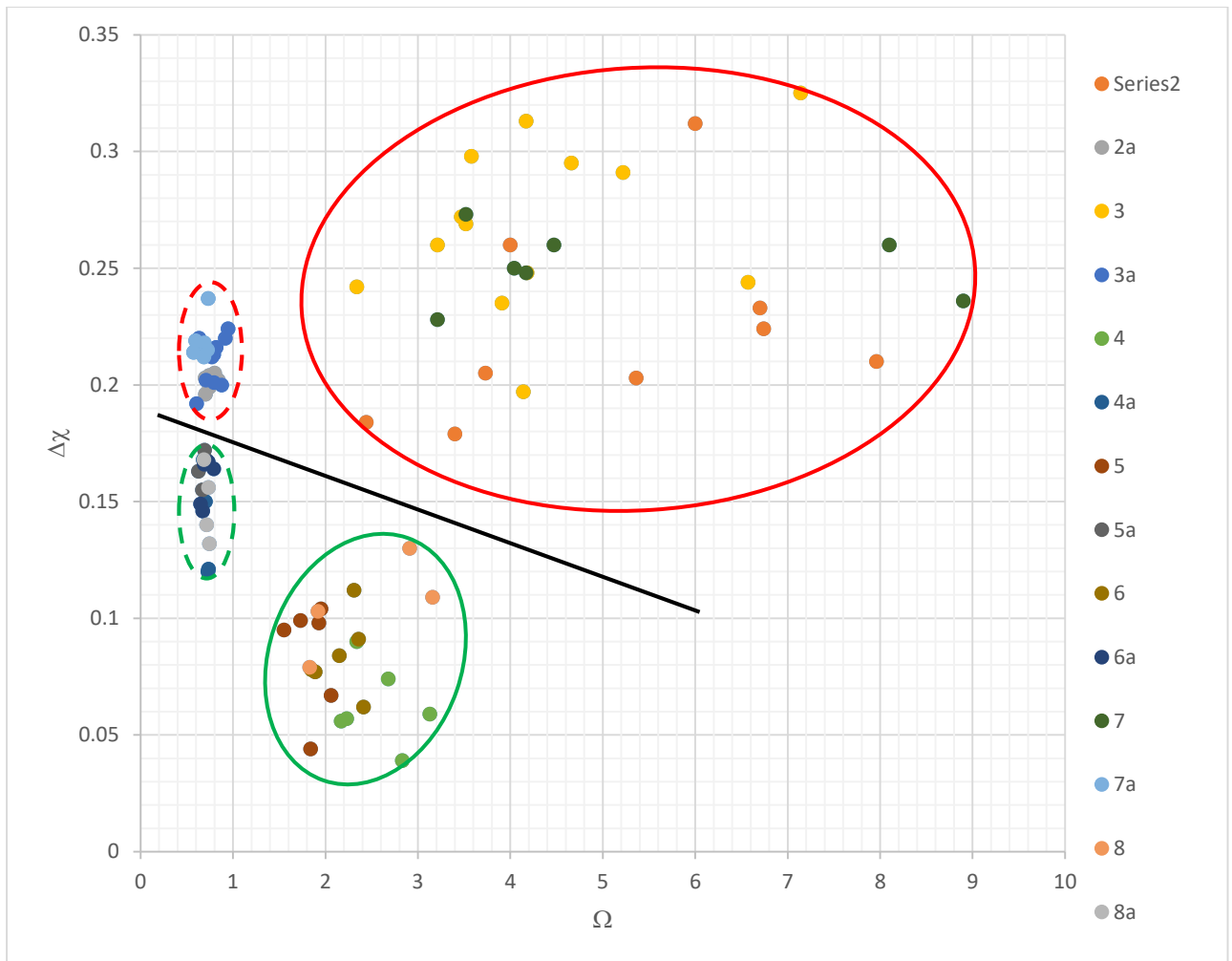


Figure 4: Plot of $\Delta\chi$ versus Ω for alloys and bcc Nb solid solutions. The red ellipses above the black line are for series 2, 2a, 3, 3a, 7, 7a where the alloying elements do not include Boron. The green ellipses below the black line are for series 4, 4a, 5, 5a, 6, 6a, 8, 8a and include data for alloys and bcc Nb solid solutions with Boron. The dashed ellipses are for the alloys and the full ones for the Nb solid solutions. The black line separates alloys without Boron (upper ellipses) from alloys with all other alloying elements including Boron (lower ellipses). For description of series 2 to 8 and 2a to 8a see text.

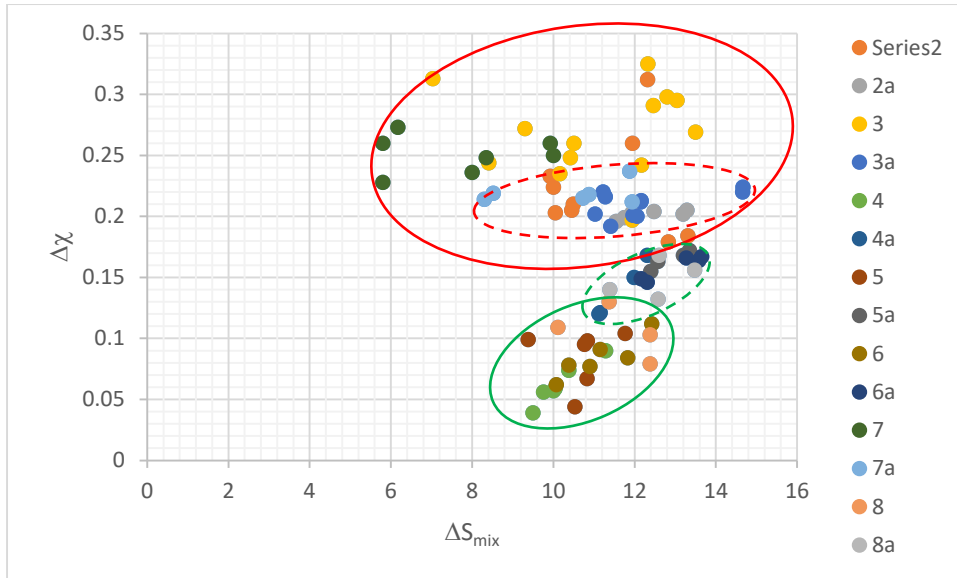


Figure 5: Plot of $\Delta\chi$ versus ΔS_{mix} for alloys and bcc Nb solid solutions. The top two red ellipses are for series 2, 2a, 3, 3a, 7, 7a where the alloying elements do not include Boron. The lower two green ellipses are for series 4, 4a, 5, 5a, 6, 6a, 8, 8a and include data for alloys and bcc Nb solid solutions with Boron. The dashed ellipses are for the alloys and the full ones for the Nb solid solutions. For description of series 2 to 8 and 2a to 8a see text.

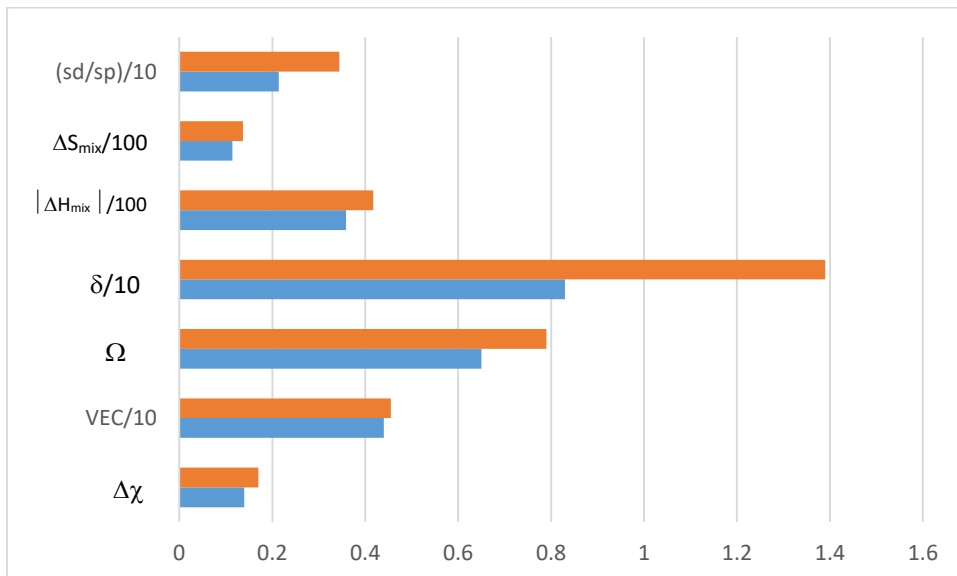


Figure 6: Ranges of the parameters studied in this paper for alloys that exhibit best isothermal oxidation at 1073 K and 1473 K (see text). The blue (short) and the orange (long) bars respectively give the minimum and maximum value of each parameter.

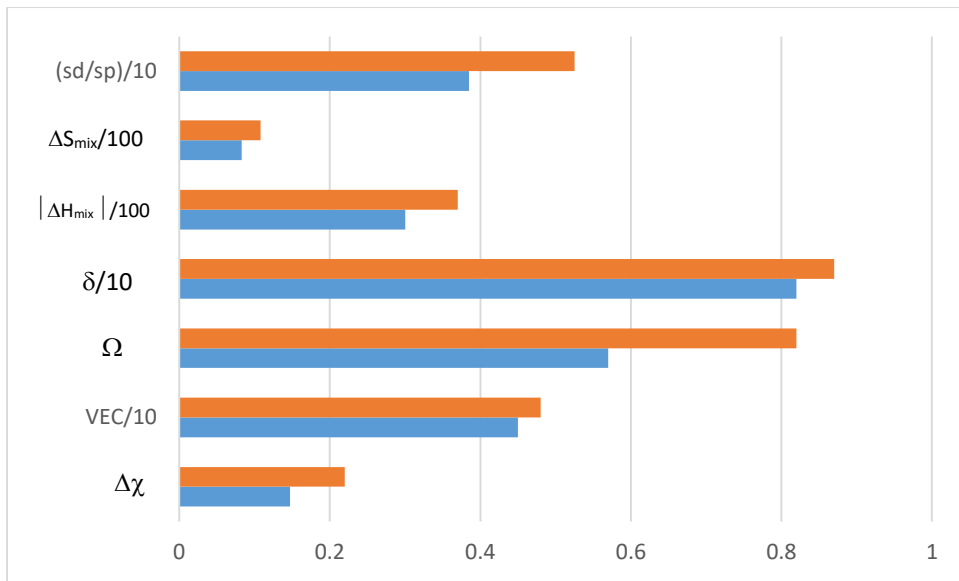


Figure 7: Ranges of the parameters studied in this paper for alloys with desirable creep at 1473 K and 210 MPa (see text). The blue (short) and the orange (long) bars respectively give the minimum and maximum value of each parameter.