Zu den Phasenbeziehungen im System V/Nb/O, IV. Die Festelektrolyt-Coulometrie (FEC) als Methode zur Aufklärung ternärer Zustandsgebiete am Beispiel des Systems V/Nb/O

The Phase Relations in the System V/Nb/O, IV.
Solid Electrolytic Coulometry (SEC) as a Method to investigate ternary Systems: V/Nb/O

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Solid Electrolytic Coulometry, Vanadium Niobium Oxides, Phase Diagram

The observation of reductive decomposition with SEC-current-time-temperature curves on the binary line V_2O_5-Nb_2O_5 is a useful method to determine qualitatively and quantitatively ("quasi in situ") the known ternary coexistence regions. By reduction of VO_2 the Magneli-Phases V_nO_{2n-1} are generated. The method is generally applicable and allows rapid information by reductive decompositon or oxidative formation in coexistence regions.

The conditions of decomposition can be optimized for a given system. Slow solid-gas equilibria are not detectable by this method.

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