

## Thermogravimetric Investigation on Oxidation Kinetics of Several Ti-Al Alloys

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**B**ars of Ti-48Al-2Cr-2Nb, Ti-48Al-2Nb-0.7Cr-0.3Si, Ti-43.5Al-4Nb-1Mo and Ti-47Al-2Cr-8Nb alloys were produced by Electron Beam Melting. The oxidation resistance in air of these alloys was investigated in the range of 800-1000 °C. Oxidation tests were performed in TGA equipment under isothermal conditions at different temperatures. The composition of the oxide layers was investigated by XRD, SEM-EDS and XPS. The oxide layers grew according to a parabolic law. The kinetic rate constants and the activation energies were calculated from the TGA results. These kinetic parameters allowed to asses a rank of oxidation resistance, which can be correlated with the composition of the alloys.

### Biography:

Oxana Ostrovskaya graduated in chemical technology of refractory non-metal and silicate materials at Belgorod Shukhov State Technological University (Russian Federation) in 2003, and she received her M.S. Degree in Materials Science and Technology from Politecnico di Torino (Italy) in 2014. At present, she is a Ph.D student in Materials Science and Technology at "Politecnico di Torino", Italy. Currently, her researches focus on Intermetallic Alloys with or within thin protective coating for aerospace applications. Oxana Ostrovskaya co-authored 3 paper articles.