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## Advanced Materials Research Group project summary

<b>Project Title</b>	Thermo-mechanical Modelling of Thermal Barrier Coating
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<b>Project Summary</b>	<p>In order to successfully design reliable TBC systems, a thorough understanding of the failure mechanism; mechanical behaviour and degradation properties of the coating at high temperatures is required. Among all of failure mechanisms of Thermal Barrier Coatings, top coat spallation and thermally grown oxide (TGO) instability caused by the rumpling of the bond coat are said to be the dominant ones. The latter one has been the main focus in developing the mathematical model that would allow the fundamental understanding of what are the physical factors that controlling the boundary of oxide layer and bond coat layer between stability and instability. High temperature oxidation testing method that is capable to degrade the TBC system will be developed.</p>