We are pleased to present a special issue on Beamed Energy Propulsion in this journal. Beamed Energy Propulsion is a promising technology for near future aerospace propulsion. It offers high payload ratio and propulsion efficiency, because the power supply is separate from the aerospace vehicle. This capability can also be used to de-orbit used satellites and space debris to a reasonably-short life time orbit before reentry. At this time, the 'beams' are primarily laser and microwave beams, but in further advanced stages could include other types such as particle beams. The concept of laser ablation propulsion technology was first proposed in the early 1970's by Arthur Kantrowitz (1972) in the United States, and also in the USSR (1973). Pioneering and early innovative work conducted in the United States, Russia, Germany, Japan and other countries led to the formation of a forum for technical exchange on this topic – the International Symposia on Beamed Energy Propulsion (ISBEP), the first of which was held at the University of Alabama, Huntsville, in November, 2002. This special issue includes a selection of leading-edge papers from the sixth ISBEP held in Scottsdale, Arizona in November 2009, and other contributions on related subjects. This special issue has two parts, the first of which is presented here; to be followed shortly by the second. We believe that many readers of the journal will be interested in the innovative and exciting technologies of beamed energy propulsion presented here.

> Akihiro Sasoh and Claude Phipps Co-editor, Special Issue of Beamed Energy Propulsion May 2010