
Introduction

Yang Ping

Laboratory of Materials and Micro-Structural Integrity,
School of Mechanical Engineering,
Jiangsu University,
Zhenjiang 212013, China
E-mail: yangping1964@163.com
E-mail: yangpingdm@ujs.edu.cn

Biographical notes: Yang Ping is a Professor at Jiangsu University in China, an editorial member of *International Journal of Materials and Product Technology*, Associate Editor-in-Chief of *International Journal of Materials and Structural Integrity*, a Director of the China Precision Machine Society and a senior member of the Chinese Institute of Electronics. He received his PhD in Mechanical Engineering from Huazhong University of Science & Technology (HUST) in 2001. He is engaged in science research at Concordia University. His research interests focus on the theoretical aspect and CAD of mechanical systems for the purposes of design and control.

The purpose of this special issue is to publish recent research outputs on product engineering employing advanced design theory, manufacturing technologies and materials. By advanced concept, we mean non-conventional techniques. In the last few decades, both academic literature and practice have put growing emphasis on the importance of advanced design, manufacturing as a key factor in establishing durable competitive advantages in product engineering. The objective of the special issue is to provide a means for the publication and interchange of information, on an international basis, on all aspects of *Advanced Theory and Technologies for Design, Manufacturing and Materials*.

The contents of this special issue include tool life and performance comparison of coated tools in metal cutting, a new approach to solve coupled task sets based on the resource balance strategy in product development, testing approach on dynamic fatigue property of PBGA assembly, n transient phenomena during engagement phase of a clutch, prediction of spring back in V -bending and design of dies using finite element simulation, effect of EDM process parameters on surface quality of Al 6063 SiC_p metal matrix composite, identification of rheological models and boundary conditions in metal forming, an adaptive neural networks model for isomorphism discernment of large-scale kinematic structure, large-scale and morphology-controlled synthesis of nano-sized molybdenum disulphide particles by different sulphur sources, enhancement of photocatalytic degradation of methylene blue in surfactant/cerium-titanium dioxide/float pearls aqueous dispersions, numerical calculation of the outer thickness of double-solid rotor asynchronous permanent magnetic coupling by finite element method, etc.

The aim of this special edition of *International Journal of Materials and Product Technology* is to describe the actual state of the art in the product engineering, as well as the recently developed new progressive design, manufacturing technologies and materials.

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