



**Journal of Zhejiang  
University-SCIENCE A  
(Applied Physics &  
Engineering)**

**Administrated by**  
Ministry of Education, China

**Sponsored by**  
Zhejiang University

**Published by**  
Zhejiang University Press

**Edited by**  
Editorial Office of *Journal of  
Zhejiang University-SCIENCE*

**Printed by**  
Hangzhou Shengyuan Printing  
Services Co., Ltd.

**Editors-in-Chief**  
Huayong YANG,  
Yunmin CHEN

**Publication Date**  
1st Week per Month

**Contact**  
Zhejiang University Press,  
148 Tianmushan Road,  
Hangzhou 310028, China;  
Tel: +86-571-87952783;  
E-mail: jzus\_a@zju.edu.cn

**Subscription**  
Zhejiang University Press;  
Tel: +86-571-87952783;  
E-mail: yangsq@zju.edu.cn;  
Postal distributing code: 32-322

**Price**  
100 CNY/Issue

**ISSN 1673-565X**  
**CN 33-1236/O4**

# CONTENTS

## Review

- 387 Current status and prospects of terminal guidance laws for intercepting hypersonic vehicles in near space: a review

Shuangxi LIU, Binbin YAN, Wei HUANG, Xu ZHANG, Jie YAN

## Research Articles

- 404 Fault diagnosis for gearboxes based on Fourier decomposition method and resonance demodulation

Shuiguang TONG, Zilong FU, Zheming TONG, Junjie LI, Feiyun CONG

- 419 Exhaust process of cryogenic nitrogen gas from a cryogenic wind tunnel with an inclined exit

Jingfeng LI, Kai WANG, Chenjie GU, Limin QIU

- 432 General variational solution for seismic and static active earth pressure on rigid walls considering soil tensile strength cut-off

Shiguo XIAO, Yuan QI, Pan XIA

- 450 Influence of yaw damper layouts on locomotive lateral dynamics performance: Pareto optimization and parameter analysis

Guang LI, Yuan YAO, Longjiang SHEN, Xiaoxing DENG, Wensheng ZHONG

## Correspondence

- 465 Mechanism of the insecticidal effect of lambda-cyhalothrin loaded mesoporous silica nanoparticles with different sizes and surface modifications on *Ostrinia furnacalis* (Guenée) larvae

Yanlong WANG, Shuting XIAO, Jiang XU, Daohui LIN

*JZUS-A* was nominated for the Fourth "Chinese Government Award for Publishing" for Journals, and was ranked in the "Top 100 Chinese Sci-Tech Journals" in 2013, 2015, and 2017. It was supported by the "Project for Enhancing International Impact of China STM Journals" (2013–2015), and it is supported by the "China Sci-Tech Journal Excellence Action Plan" (2019–2023).

**English Consultants** Alan SEAL (NZ), Robert WELHAM (UK)

**Executive Editors** Shuqi YANG, Xinxin ZHANG