

ICF14
14th International Conference on Fracture
June 18-23, 2017, Rhodes, Greece

SYMPOSIUM ORGANIZERS SUMMARY FORM

[Please complete and submit by August 31, 2016](#)

Session/Symposium Title:

Mechanical strength of graphene and low dimensional materials

Session/Symposium Chair:

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List: Paper Titles in Presentation Order (for advance program)

Corresponding author, address and e-mail

Additional authors with their complete affiliation.

1. Title: Topological Toughening of graphene and other 2D materials

Corresponding Author: Huajian Gao

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2. Title: Flexo-electric quantum mechanical toughening and embrittlement in graphene
adhesion

Corresponding Author: Kyung-Suk Kim

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- 3. Title:** Orientations and local structure dependent fracture strength of graphene
Corresponding Author: Yujie Wei
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Ronggui Yang: Department of Mechanical Engineering and Materials Science and Engineering Program, University of Colorado, Boulder, CO 80309, USA
Mildred Dresselhaus: Department of Physics and EECS, Massachusetts Institute of Technology, Cambridge, MA 02139, USA
- 4. Title:** Scaling laws for mechanical properties of graphenes
Corresponding Author: Tienchong Chang
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Jiaying Qu, Jianxin Li: State Key Laboratory of Ocean Engineering, School of Naval Architecture, Ocean and Civil Engineering, Shanghai Jiao Tong University, Shanghai 200240, China
- 5. Title:** Phase transition and deformation behaviors in 2D materials
Corresponding Author: Fei Ma
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Zhi Yang, Hongwei Bao, Kewei Xu: State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University, Xi'an 710049, Shaanxi, China
- 6. Title:** Will graphene crack during roll-to-roll transfer?
Corresponding Author: Kenneth M. Liechti
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Seung Ryul Na, Xiaohan Wang, Richard D. Piner, Rui Huang, C. Grant Willson: Department of Aerospace Engineering and Engineering Mechanics, University of Texas at Austin, Austin, Texas 78712, USA
- 7. Title:** Deformation and failure mechanisms of graphene during frictional sliding
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Co-authors names & affiliations:

Yizhou Qi: Department of Engineering Mechanics, Tsinghua University, Beijing 100084 China

Jun Liu, Yalin Dong: Department of Mechanical Engineering, University of Akron, Akron Ohio 44325, USA

8. Title: Brittle Fracture of Two-Dimensional Materials

Corresponding Author: Jun Lou

Corresponding author address: Department of Materials Science and NanoEngineering, Rice University, Houston, TX 77251 USA

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9. Title: Mechanical properties of graphene and other 2D materials

Corresponding Author: Changgu Lee

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10. Title: Plasticity and Fracture of Monolayer Graphene Oxide Sheets

Corresponding Author: Xiaoding Wei

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Horacio D. Espinosa: Department of Mechanical Engineering, Northwestern University, 2145 Sheridan Road, Evanston, Illinois 60208, USA

11. Title: Fracture behavior of polycrystalline graphene investigated by indentation tests

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12. Title: Mechanical Performance of Graphene and Oxidized Graphene on Polymer Substrate

Corresponding Author: Zhong Zhang

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Guorui Wang, Luqi Liu: National Center for Nanoscience and Technology, Beijing, China

13. Title: Strength and Wettability of Graphene from Theoretical Perspective

Corresponding Author: Seunghwa Ryu

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Co-authors names &affiliations:

Donggyu Kim, Sangryun Lee, Jihoon Han: Department of Mechanical Engineering, Korea Advanced Institute of Science and Technology, Daejeon 34141, Republic of Korea

14. Title: Tuning interlayer mechanical properties of graphene by topological defects and interlayer crosslinking

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15. Title: Mechanical properties of defects in single-atomic-thick two-dimensional materials

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16. Title: Ballistic impact of few-layer graphene

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17. Title: An experimental investigation on the tangential interfacial properties of graphene: Size effect

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18. Title: Defects and Failure Behaviour of Phosphorene

Corresponding Author: Yong-Wei ZHANG

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19. Title: Multiscale fracture mechanics of metallic nanomaterials

Corresponding Author: Jian Lu

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20. Title: Ultra-strength and fracture of metallic and semiconductor nanowires

Corresponding Author: Yang Lu

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21. Title: Multiscale mechanics and fracture of low-dimensional materials and their bio-inspired 3D structures

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1. A session has five papers

2. A symposium has twenty or more papers (four sessions or more)