

Recent Journal Publications

1. "The effective interfacial shear strength of carbon nanotube fibers in an epoxy matrix characterized by a microdroplet test," **Carbon**, 50, 1271-1279 (2012), with M. Zu, Q.W. Li, Y.T. Zhu, M. Dey, G.J. Wang, W.B. Lu, J.M. Deitzel, J.W. Gillespie Jr., and J.H. Byun.
2. "Electromechanical Response and Failure Behavior of Aerogel-Spun Carbon Nanotube Fibers under Tensile Loading," **Journal of Material Chemistry**, 22, 6792-6798 (2012), with A.S. Wu, J.W. Gillespie Jr., D. Lashmore, and J. Rioux.
3. "A State-of-Art Review of Carbon Nanotube Fibers: Opportunities and Challenges," **Advanced Materials**, 24 1805-1833 (2012), with W.B. Lu, M. Zu, J.H. Byun, and B. S. Kim.
4. "The use of Taguchi optimization in determining optimum electrophoretic conditions for the deposition of carbon nanofiber on carbon fibers for use in carbon/epoxy composites," **Carbon** 50, 2853-2859 (2012), with Y. Q. Wang, J. H. Byun, B. S. Kim, and J. I. Song.
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6. "Characterization of carbon nanotube fiber compressive properties using tensile recoil measurement," **ACS Nano**, 60, 4288-4297 (2012), with M. Zu, W. B. Lu, Q. W. Li, and Y. T. Zhu.
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8. "Carbon Nanotube Fibers for Advanced Composites." **Materials Today**, 15, 302-310 (2012), with A. S. Wu.
9. "Stress relaxation in carbon nanotube-based fibers for load-bearing applications," **Carbon**, 52, 347-355 (2012), with M. Zu, Q. W. Li, Y. T. Zhu, Y. Zhu, G. J. Wang, and J. H. Byun.
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11. "Sensing of damage and healing in three-dimensional braided composites with vascular channels," **Composites Science and Technology**, 72, 1618-1626 (2012), with A. S. Wu, A. M. Coppola, M. J. Sinnott, E. T. Thostenson, J. H. Byun, and B. S. Kim.
12. "Carbon nanotube film interlayer for strain and damage sensing in composites during dynamic compressive loading," **Applied Physics Letters**, 101, 221909 (2012), with A. S. Wu, W. -J. Na, W.-R. Yu, and J.-H. Byun.
13. "Carbon Nanotube Fiber Based Stretchable Conductor," **Advanced Functional Materials**, 23, 789-793 (2013), with M. Zu, Q.W. Li, G.J. Wang, and J. H. Byun.
14. "Microstructural evolution of carbon nanotube fibers: deformation and strength mechanism," **Nanoscale**, 5, 2002-2008 (2013), with X. Liu, W. B. Lu, O. M. Ayala, L. P. Wang, A. M. Karlsson, and Q. S. Yang.
15. "Mechanical behavior and structural evolution of carbon nanotube films and fibers under tension: a coarse-grained molecular dynamics study," **Journal of Applied Mechanics**, 80(5), 051015 (2013), with W. B. Lu, X. Liu, Q. W. Li, and J. H. Byun.
16. "Carbon Nanotube Fiber Based Stretchable Wire-Shaped Supercapacitors," **Advanced Energy Materials**, 4, 1300759 (2014), with P. Xu, T. L. Gu, Z. Y. Cao, B. Q. Wei, J. Y. Yu, F. X. Li, J-H. Byun, W. B. Lu, and Q. W. Li.

17. "Synthesis and failure behavior of super-aligned carbon nanotube film wrapped graphene fibers," **Carbon**, 72, 250-256 (2014), with F. C. Meng, R. Li, Q. W. Li, and W. B. Lu.
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19. "Laminated ultrathin chemical vapor deposition graphene films based stretchable and transparent high-rate supercapacitor," **ACS Nano**, 8(9), 9437-9445 (2014), with P. Xu, J. Kang, J.-B. Choi, J. Suhr, J. Yu, F. Li, J.-H. Byun, and B.-S. Kim.
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21. "Stretchable Wire-Shaped Asymmetric Supercapacitors Based on Pristine and MnO₂ Coated Carbon Nanotube Fibers," **ACS Nano**, 9(6), 6088–6096 (2015), with P. Xu, B. Wei, Z. Cao, J. Zheng, K. Gong, F. Li, J. Yu, Q. Li, W. Lu, J.-H. Byun, B.-S. Kim, and Y. Yan.
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26. "Graphene-Based Fibers: A Review," **Advanced Materials**, 27, 5113-5131 (2015), with F. Meng, W. Lu, Q. Li, J.-H. Byun, and Y. Oh.
27. "High-Strength Single-Walled Carbon Nanotube/Permalloy Nanoparticle/Poly(vinyl alcohol) Multifunctional Nanocomposite Fiber", **ACS Nano**, 9(11), 11414-11421 (2015), with G. Zhou, Y.-Q. Wang, J.-H. Byun, J.-W. Yi, S.-S. Yoon, H.-J. Cha, J.-U. Lee, Y. Oh, B.-M. Jung, and H.-J. Moon.
28. "Microstructural design and additive manufacturing and characterization of 3D orthogonal short carbon fiber/acrylonitrile-butadiene-styrene preform and composite", **Composites Science and Technology**, 126, 139-148 (2016), with Z. Quan, Z. Larimore, A. Wu, J. Yu, X. Qin, M. Mirotznik, J. Suhr, J.-H. Byun, and Y. Oh.
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33. “Multifunctional continuous fibers based on aligned carbon nanotubes”, **Journal of Physics D: Applied Physics**, 49,461002 (2016), TW Chou.
34. “A High Performance Stretchable Asymmetric Fiber-Shaped Supercapacitor with a Core-Sheath Helical Structure”, **Advanced Energy Materials**, 7, 1600976 (2017), with J. Yu, W. Lu, J. P. Smith, K. S. Booksh, L. Meng, Y. Huang, Q. Li, J.-H. Byun, Y. Oh, and Y. Yan.
35. “Electromechanical behavior of carbon nanotube fibers under transverse compression”, **Journal of Physics D: Applied Physics**, 50, 085303 (2017), with Y. Li, W. Lu, S. Sockalingam, B. Gu, B. Sun, J. Gillespie.
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