

Polymer Vol. 50, No. 3, 28 January 2009

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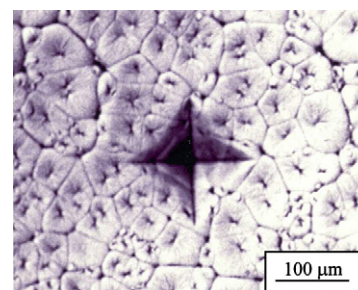
FEATURE ARTICLE

From the glassy state to ordered polymer structures: A microhardness study

A. Flores, F. Ania, F.J. Baltá-Calleja*

Department of Macromolecular Physics, Instituto de Estructura de la Materia, CSIC, Serrano 119, 28006 Madrid, Spain

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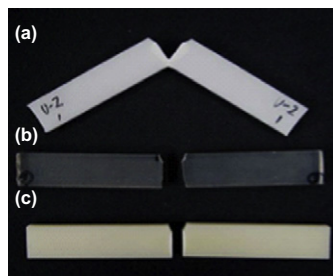
POLYMER COMMUNICATIONS

Super-tough poly(lactic acid) materials: Reactive blending with ethylene copolymer

Hideko T. Oyama

Department of Science, Rikkyo University, Toshima-ku, Tokyo 171-8501, Japan

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Specimens after notched impact tests and their impact strength

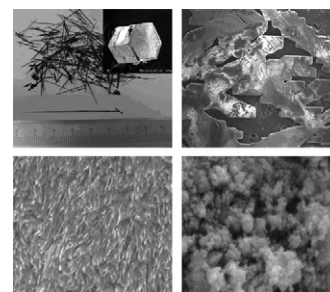
- (a) annealed L80-200
72 kJ/m²
- (b) neat as-prepared PLA-L
2 kJ/m²
- (c) as-prepared ABS
21 kJ/m²

Polyacrylamide-controlled growth of centimeter-scaled polyaniline fibers

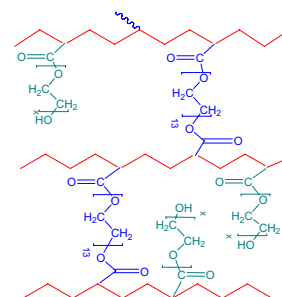
Qunwei Tang, Jihuai Wu*, Xiaoming Sun, Qinghua Li, Jianming Lin, Leqing Fan

The Key Laboratory for Functional Materials of Fujian Higher Education, Institute of Materials Physical Chemistry, Huaqiao University, Quanzhou 362021, China

pp 752–755

**POLYMER PAPERS****PEG-based hydrogel membrane coatings**Alyson C. Sagle^a, Hao Ju^a, Benny D. Freeman^{a,*}, Mukul M. Sharma^b^a *University of Texas at Austin, Center for Energy and Environmental Resources, 10100 Burnet Road, Building 133, Austin TX 78758, United States*^b *University of Texas at Austin, Department of Petroleum and Geosystems Engineering, 1 University Station C0300, Austin TX 78712, United States*

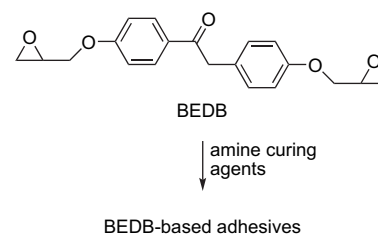
pp 756–766

**Deoxybenzoin-based epoxy resins**

Beom-Young Ryu, Sungcheal Moon, Irem Kosif, T. Ranganathan, Richard J. Farris*, Todd Emrick*

Polymer Science and Engineering Department, University of Massachusetts, 120 Governors Drive, Amherst, MA 01003, United States

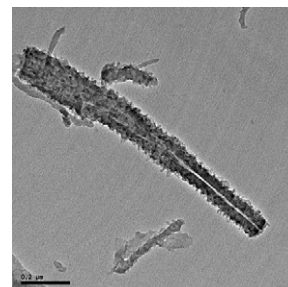
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**Introduction of methanol in the formation of polyaniline nanotubes in an acid-free aqueous solution through a self-curling process**

Y.F. Huang, C.W. Lin*

Department of Chemical and Materials Engineering, National Yunlin University of Science and Technology, Yunlin 640, Taiwan

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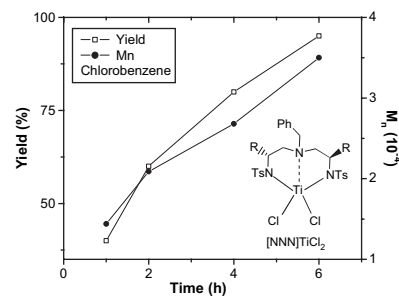


Polymerization of vinyl ethers using titanium catalysts containing tridentate triamine ligand of the type $N[CH_2CH(Ph)(Ts)N]_2^-$

Padmanabhan Sudhakar*, Kari Vijayakrishna

Department of Chemistry, Indian Institute of Technology, Madras 600036, India

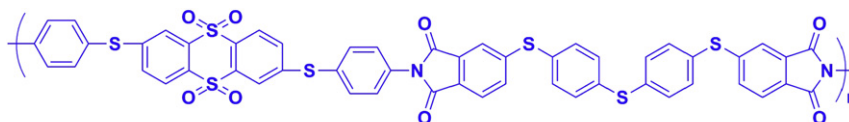
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Synthesis and characterization of highly refractive polyimides derived from 2,7-bis(4'-aminophenylenesulfanyl)thianthrene-5,5,10,10-tetraoxide and aromatic dianhydrides

Nam-Ho You, Yasuo Suzuki, Tomoya Higashihara, Shiji Ando, Mitsuru Ueda*

Department of Organic and Polymeric Materials, Graduate School of Science and Engineering, Tokyo Institute of Technology, 2-12-1, H-120, O-okayama, Meguro-ku, Tokyo 152-8552, Japan



3SDEA-APTTT

Refractive Index: 1.7374

Birefringence: 0.0084

Tg: 250 °C

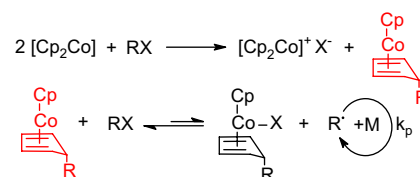
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The exo-substituted η^4 -cyclopentadiene CpCo(I) complexes: A new kind of ATRP catalysts and the actual catalyst for the cobaltocene-catalyzed ATRP

Xiongxiong Luo, Xi Zhao, Shansheng Xu, Baiquan Wang*

State Key Laboratory of Elemento-Organic Chemistry, College of Chemistry, Nankai University, Weijin Road 94, Tianjin 300071, People's Republic of China

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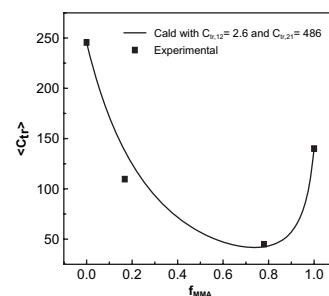
Effect of monomer composition on apparent chain transfer coefficient in reversible addition fragmentation transfer (RAFT) copolymerization

Jing Gao^a, Yingwu Luo^{a,*}, Rui Wang^a, Xiaojuan Zhang^a, Bo-Geng Li^{a,*}, Shiping Zhu^{b,*}

^a Department of Chemical and Biochemical Engineering, The State Key Laboratory of Chemical Engineering, Zhejiang University, 38 ZheDa Rd., Hangzhou 310027, PR China

^b Department of Chemical Engineering, McMaster University, Hamilton, Ontario L8S 4L7, Canada

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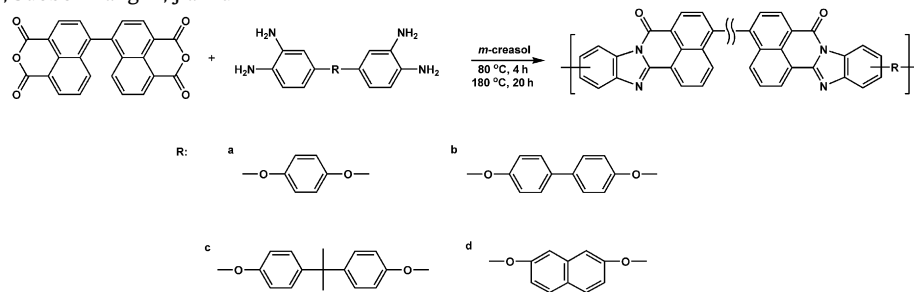
Synthesis and properties of soluble poly[bis(benzimidazobenzisoquinolinones)] based on novel aromatic tetraamine monomers

pp 810–816

Junhua Wang^{a, b}, Nanwen Li^{a, b}, Feng Zhang^{a, b}, Suobo Zhang^{a, *}, Jia Liu^a

^a State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, China

^b Graduate School of Chinese Academy of Sciences, China

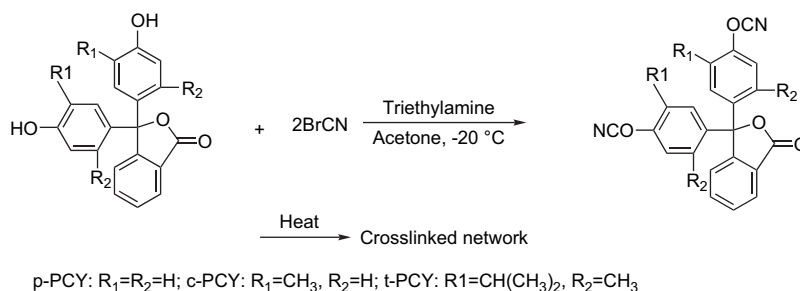


Synthesis and properties of a series of cyanate resins based on phenolphthalein and its derivatives

pp 817–824

Bufeng Zhang, Zhonggang Wang^{*}, Xia Zhang

Department of Polymer Science and Materials, School of Chemical Engineering, Dalian University of Technology, Zhongshan Road 158, Dalian 116012, PR China

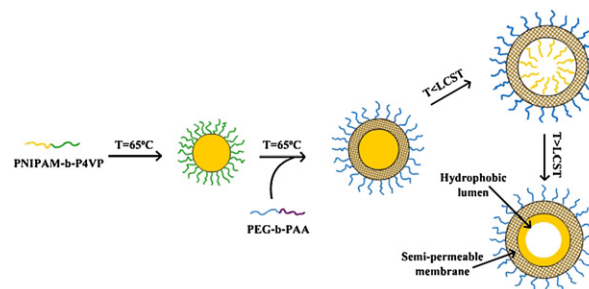


Fabrication of an asymmetric hollow particle with a thermo-sensitive PNIPAM inside corona

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Zhe Li, De'an Xiong, Bing Xu, Chenglin Wu, Yingli An, Rujiang Ma, Linqi Shi^{*}

Key Laboratory of Functional Polymer Materials, Ministry of Education, Institute of Polymer Chemistry, Nankai University, Tianjin 300071, China



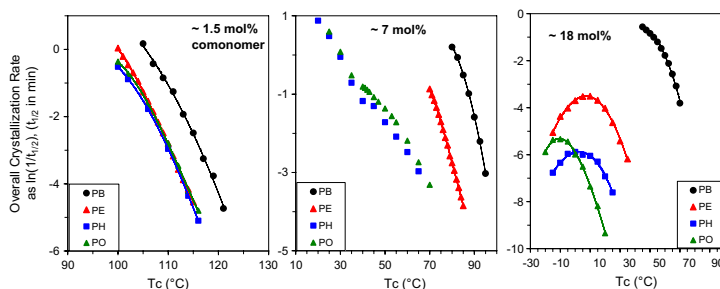
Effect of comonomer type on the crystallization kinetics and crystalline structure of random isotactic propylene 1-alkene copolymers

pp 832–844

K. Jeon^a, H. Palza^b, R. Quijada^b, R.G. Alamo^{a, *}

^a Florida Agricultural and Mechanical University and Florida State University College of Engineering, Department of Chemical and Biomedical Engineering, 2525 Pottsdamer St., Tallahassee, FL 32310-6046, United States

^b Departamento de Ingeniería Química, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile, y Centro para la Investigación Interdisciplinaria Avanzada en Ciencia de los Materiales (CIMAT), Casilla 2777 Santiago, Chile

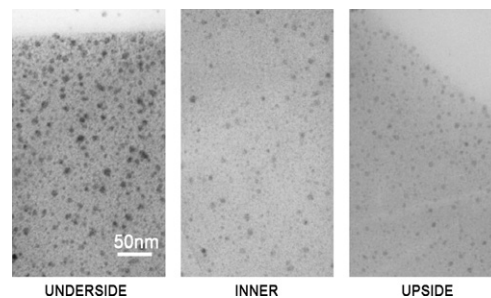


The chemistry involved in the loading of silver(I) into poly(amic acid) via ion exchange: A metal-ion-induced crosslinking behavior

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Shengli Qi, Zhanpeng Wu, Dezhen Wu*, Wantai Yang, Riguang Jin

State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, 15 Beisanhuan East Road, Beijing 100029, China

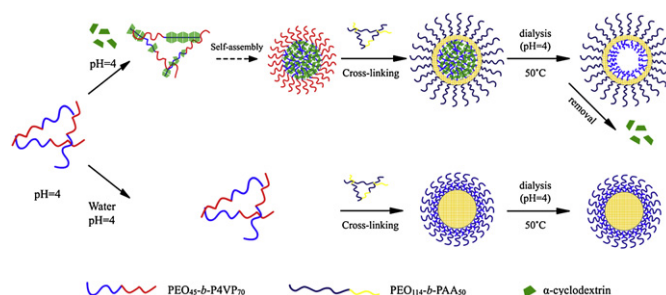


Chaperone-like α -cyclodextrins assisted self-assembly of double hydrophilic block copolymers in aqueous medium

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Yang Liu, Dongyun Zhao, Rujiang Ma, De'an Xiong, Yingli An, Linqi Shi*

Key Laboratory of Functional Polymer Materials, Ministry of Education, Institute of Polymer Chemistry, Nankai University, Tianjin 300071, China



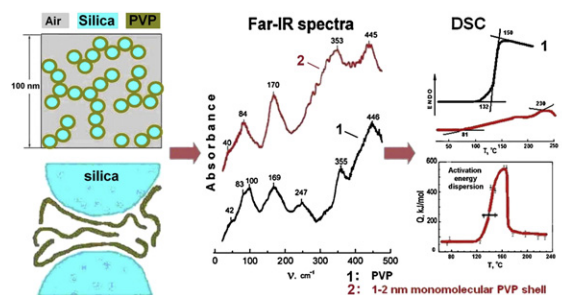
Well-defined silica core-poly(vinyl pyrrolidone) shell nanoparticles: Interactions and multi-modal glass transition dynamics at interfaces

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Vladimir Bershtein^{a,*}, Vladimir Gun'ko^b, Larisa Egorova^a, Natalia Guzenko^b, Eugene Pakhlov^b, Valery Ryzhov^a, Vladimir Zarko^b

^a Materials Dynamics Laboratory, Ioffe Physico-Technical Institute RAS, Department of Solid State Physics, 26 Polytekhnicheskaya Str., 194021 St. Petersburg, Russia

^b Department of Amorphous and Structurally Ordered Oxides, Institute of Surface Chemistry NAS, 03164 Kiev, Ukraine

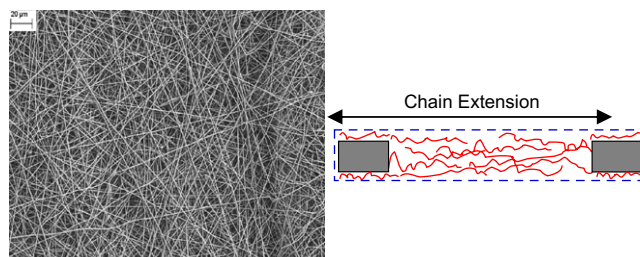


Chain confinement in electrospun nanofibers of PET with carbon nanotubes

pp 872–880

Huipeng Chen, Zhen Liu, Peggy Cebe*

Department of Physics and Astronomy, Tufts University, 4 Colby Street, Medford, MA 02155, USA

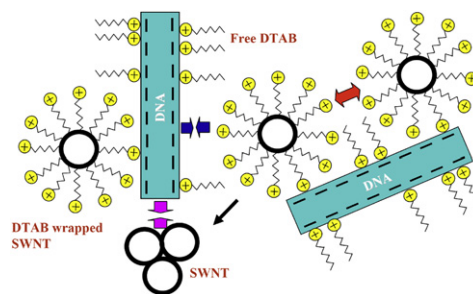


Bio-nano complexes: DNA/surfactant/single-walled carbon nanotube interactions in electric field

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HyungKi Lee, Jovan Mijović*

Othmer–Jacobs Department of Chemical and Biological Engineering, Polytechnic Institute of New York University, Six Metrotech Center, Brooklyn, NY 11201, USA

**Dynamic relaxation characteristics of Matrimid® polyimide**

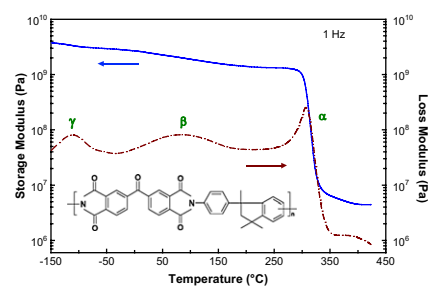
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Anthony C. Comer^a, Douglass S. Kalika^{a,*}, Brandon W. Rowe^{b,c}, Benny D. Freeman^{b,c}, Donald R. Paul^b

^a Department of Chemical and Materials Engineering, University of Kentucky, Lexington, KY 40506-0046, USA

^b Department of Chemical Engineering and Texas Materials Institute, The University of Texas at Austin, Austin, TX 78712, USA

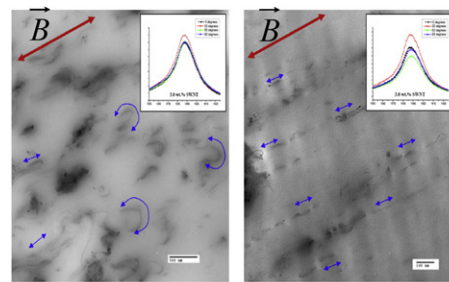
^c Center for Energy and Environmental Resources, Department of Chemical Engineering, The University of Texas at Austin, Austin, TX 78758, USA

**Magnetic field alignment and electrical properties of solution cast PET–carbon nanotube composite films**

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Brian W. Steinert, Derrick R. Dean*

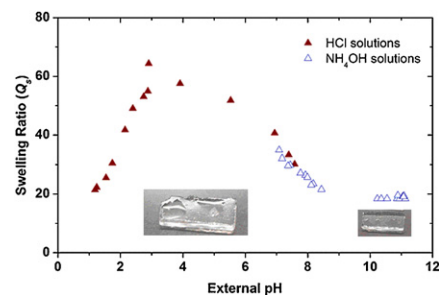
University of Alabama at Birmingham, Department of Materials Science and Engineering, 1530 3rd Avenue South, Birmingham, AL 35294-4461, USA

**pH-dependent swelling of hydrogels containing highly branched polyamine macromonomers**

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Burcu Unal, Ronald C. Hedden*

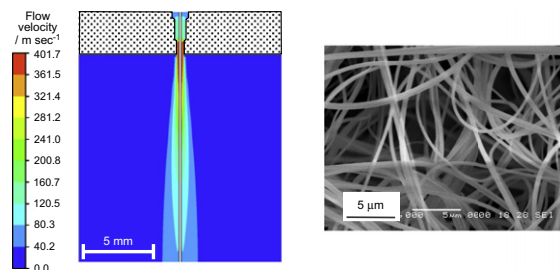
Department of Materials Science and Engineering, The Pennsylvania State University, University Park, PA 16802, USA



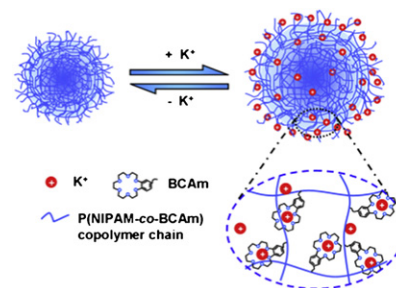
Poly(ethylene terephthalate) nanofibers prepared by CO₂ laser supersonic drawing

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Akihiro Suzuki*, Ken Tanizawa

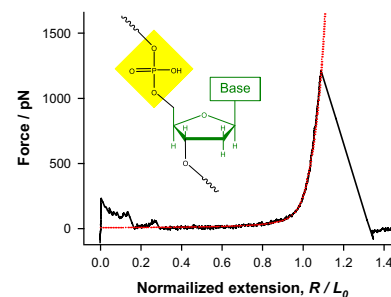
Interdisciplinary Graduate School of Medicine and Engineering,
University of Yamanashi, Takeda-4, Kofu 400-8511, Japan**Dual thermo-responsive and ion-recognizable monodisperse microspheres**

pp 922–929

Xiao-Jie Ju^a, Li Liu^a, Rui Xie^a, Catherine Hui Niu^b, Liang-Yin Chu^{a, c, *}^a School of Chemical Engineering, Sichuan University, Chengdu, Sichuan 610065, China^b Department of Chemical Engineering, University of Saskatchewan, 57 Campus Drive, Saskatoon, SK S7N 5A9, Canada^c Institute for Nanobiomedical Technology and Membrane Biology, State Key Laboratory of Biotherapy, West China Hospital, West China Medical School, Sichuan University, Chengdu, Sichuan 610041, China**Modeling single chain elasticity of single-stranded DNA: A comparison of three models**

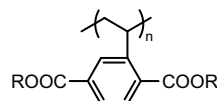
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Shuxun Cui*, You Yu, Zhangbi Lin

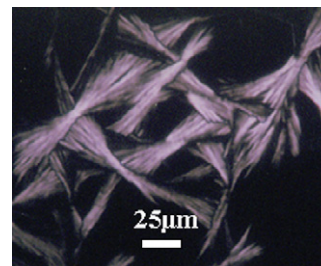
State Key Laboratory of Polymer Materials Engineering, Polymer Research Institute, Sichuan University,
Kehua North Road 133, Chengdu 610065, PR China**Structure–property relationship of thermotropic liquid-crystalline vinyl polymers containing no traditional mesogen**

pp 936–944

Yan Guan, Xiaofang Chen, Zhihao Shen, Xinhua Wan*, Qifeng Zhou**

Beijing National Laboratory for Molecular Sciences, Key Laboratory
of Polymer Chemistry and Physics of Ministry of Education,
College of Chemistry and Molecular Engineering, Peking University,
202 Cheng Fu Road, Beijing 100871, China

R = 1-methyl butyl; 1-methyl ethyl;
2-methyl butyl; 1-ethyl propyl;
3-methyl butyl; 1-propyl butyl;
1,2-dimethyl propyl

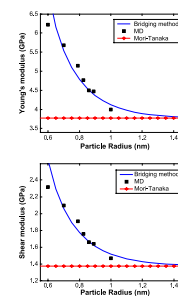


Multi-scale modeling of cross-linked epoxy nanocomposites

Suyoung Yu, Seunghwa Yang, Maenghyo Cho*

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School of Mechanical and Aerospace Engineering, Seoul National University, San 56-1, Shillim-Dong,
Kwanak-Ku, Seoul 151-744, Republic of Korea



*Corresponding author



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