

TM
BGM

BioMACROMOLECULES

OCTOBER 2014

VOLUME 15, NUMBER 10 pubs.acs.org/Biomac



ACS Publications
Most Trusted. Most Cited. Most Read.

www.acs.org

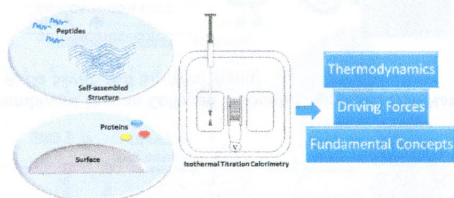
Reviews

3463

[dx.doi.org/10.1021/bm5004515](https://doi.org/10.1021/bm5004515)

Application of Isothermal Titration Calorimetry for Characterizing Thermodynamic Parameters of Biomolecular Interactions: Peptide Self-Assembly and Protein Adsorption Case Studies

Maryam Kabiri and Larry D. Unsworth*

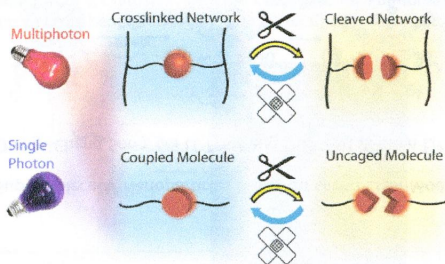


3474

[dx.doi.org/10.1021/bm500990z](https://doi.org/10.1021/bm500990z)

Photoreconfigurable Polymers for Biomedical Applications: Chemistry and Macromolecular Engineering

Congcong Zhu, Chi Ninh, and Christopher J. Bettinger*



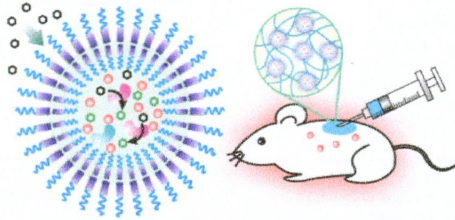
Articles

3495 **S**

[dx.doi.org/10.1021/bm500364a](https://doi.org/10.1021/bm500364a)

Bio-Inspired Synthetic Nanovesicles for Glucose-Responsive Release of Insulin

Wanyi Tai, Ran Mo, Jin Di, Vinayak Subramanian, Xiao Gu, John B. Buse, and Zhen Gu*

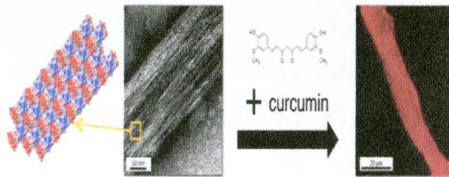


3503 **S**

[dx.doi.org/10.1021/bm5004948](https://doi.org/10.1021/bm5004948)

Engineered Coiled-Coil Protein Microfibers

Jasmin Hume, Jennifer Sun, Rudy Jacquet, P. Douglas Renfrew, Jesse A. Martin, Richard Bonneau, M. Lane Gilchrist, and Jin Kim Montclare*

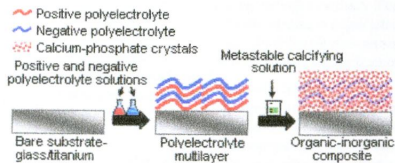


3511

[dx.doi.org/10.1021/bm5006245](https://doi.org/10.1021/bm5006245)

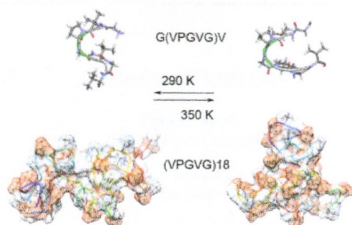
Polyelectrolyte Multilayer-Calcium Phosphate Composite Coatings for Metal Implants

Alon Elyada, Nissim Garti, and Helga Füredi-Milhofer*

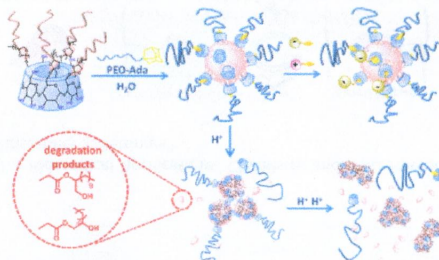


Molecular Description of the LCST Behavior of an Elastin-Like Polypeptide

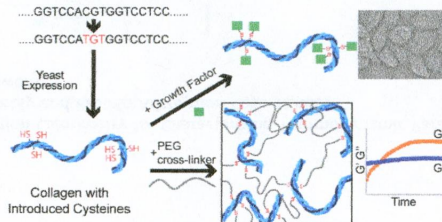
Nan K. Li, Felipe García Quiroz, Carol K. Hall, Ashutosh Chilkoti, and Yaroslava G. Yingling*

**Shell-Sheddable, pH-Sensitive Supramolecular Nanoparticles Based on Ortho Ester-Modified Cyclodextrin and Adamantyl PEG**

Ran Ji, Jing Cheng, Ting Yang, Cheng-Cheng Song, Lei Li, Fu-Sheng Du,* and Zi-Chen Li*

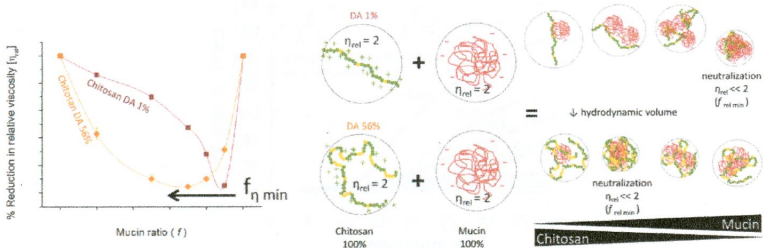
**Expanding Functionality of Recombinant Human Collagen Through Engineered Non-Native Cysteines**

Richard Que, Ali Mohraz, Nancy A. Da Silva,* and Szu-Wen Wang*



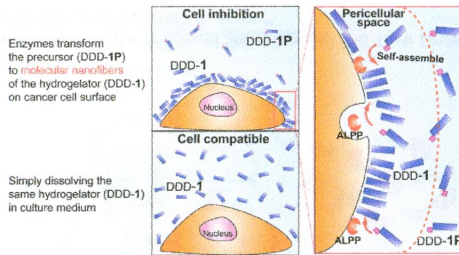
Structure of Chitosan Determines Its Interactions with Mucin

B. Menchicchi, J. P. Fuenzalida, Kishore Babu Bobbili, A. Hensel, Musti J. Swamy, and F. M. Goycoolea*



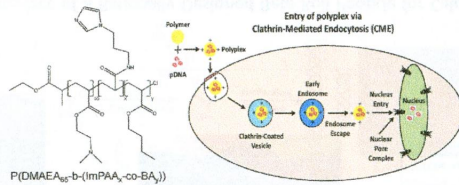
D-Amino Acids Modulate the Cellular Response of Enzymatic-Instructed Supramolecular Nanofibers of Small Peptides

Junfeng Shi, Xuewen Du, Dan Yuan, Jie Zhou, Ning Zhou, Yibing Huang, and Bing Xu*



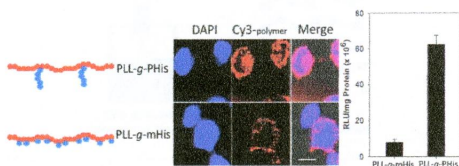
Intracellular Trafficking Pathways for Nuclear Delivery of Plasmid DNA Complexed with Highly Efficient Endosome Escape Polymers

Marianne Gillard, Zhongfan Jia, Jeff Jia Cheng Hou, Michael Song, Peter P. Gray, Trent P. Munro, and Michael J. Monteiro*



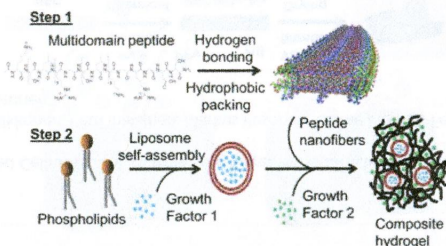
Role of Polymeric Endosomolytic Agents in Gene Transfection: A Comparative Study of Poly(L-lysine) Grafted with Monomeric L-Histidine Analogue and Poly(L-histidine)

Hee Sook Hwang, Jun Hu, Kun Na, and You Han Bae*



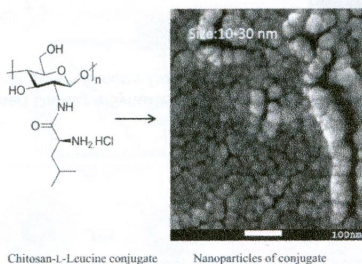
Two-Step Self-Assembly of Liposome-Multidomain Peptide Nanofiber Hydrogel for Time-Controlled Release

Navindee C. Wickremasinghe, Vivek A. Kumar, and Jeffrey D. Hartgerink*



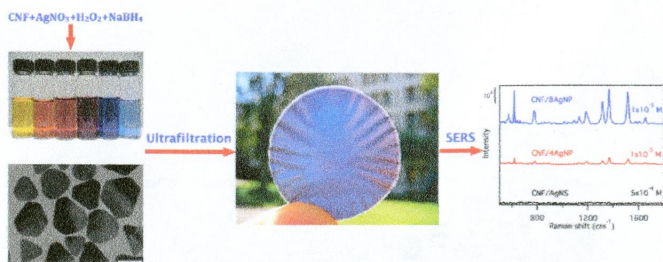
Synthesis and Toxicological Evaluation of a Chitosan-L-Leucine Conjugate for Pulmonary Drug Delivery Applications

Mohammad D. A. Muhsin, Graeme George, Kenneth Beagley, Vito Ferro, Charles Armitage, and Nazrul Islam*



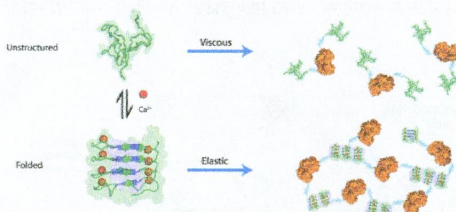
Synthesis of Cellulose Nanofibril Bound Silver Nanoprism for Surface Enhanced Raman Scattering

Feng Jiang and You-Lo Hsieh*



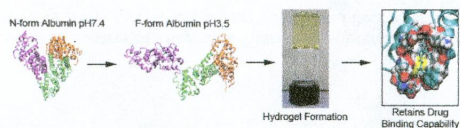
Doubling the Cross-Linking Interface of a Rationally Designed Beta Roll Peptide for Calcium-Dependent Proteinaceous Hydrogel Formation

Kevin Dooley, Beyza Bulutoglu, and Scott Banta*



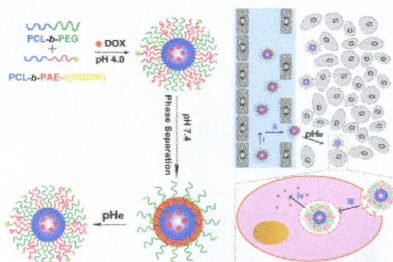
Albumin Hydrogels Formed by Electrostatically Triggered Self-Assembly and Their Drug Delivery Capability

Kevin Baler, Raman Michael, Igal Szelefer, and Guillermo A. Ameer*



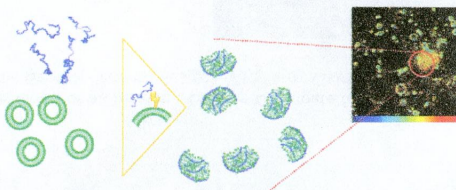
Self-Regulated Multifunctional Collaboration of Targeted Nanocarriers for Enhanced Tumor Therapy

Hongjun Gao, Tangjian Cheng, Jianfeng Liu, Jinjian Liu, Cuihong Yang, Liping Chu, Yumin Zhang, Rujiang Ma, and Linqi Shi*



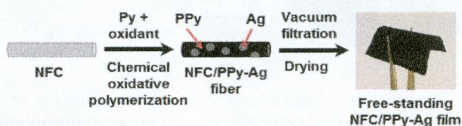
Protein/Lipid Coaggregates are Formed During α -Synuclein-Induced Disruption of Lipid Bilayers

Andreas van Maarschalkerweerd, Valeria Vetri,* Annette Eva Langkilde, Vito Foderà, and Bente Vestergaard*



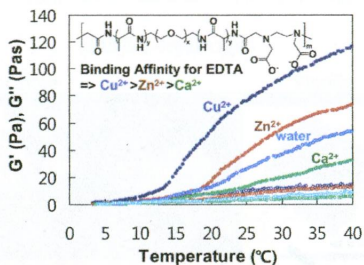
Biocomposites of Nanofibrillated Cellulose, Polypyrrole, and Silver Nanoparticles with Electroconductive and Antimicrobial Properties

Patrycja Bober, Jun Liu, Kirsi S. Mikkonen, Petri Ihalainen, Markus Pesonen, Carme Plumed-Ferrer, Atte von Wright, Tom Lindfors, Chunlin Xu,* and Rose-Marie Latonen*



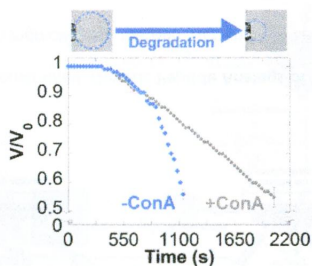
Ion and Temperature Sensitive Polypeptide Block Copolymer

Jae Hee Joo, Du Young Ko, Hyo Jung Moon, Usha Pramod Shinde, Min Hee Park, and Byeongmoon Jeong*



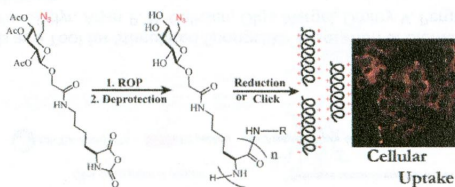
Chain and Pore-Blocking Effects on Matrix Degradation in Protein-Loaded Microgels

Ronja Widenbring,* Göran Frénning, and Martin Malmsten



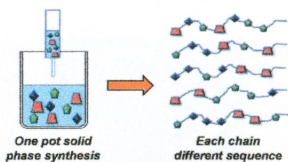
Cationic Charged Helical Glycopolypeptide Using Ring Opening Polymerization of 6-Deoxy-6-azido-glyco-*N*-carboxyanhydride

Ashif Y. Shaikh, Soumen Das, Debasis Pati, Vinita Dhaware, Sayam Sen Gupta,* and Srinivas Hotha*

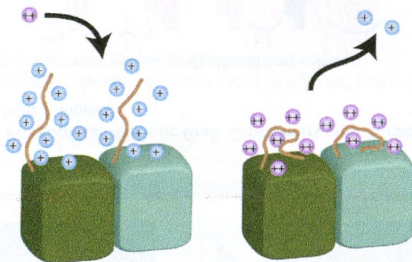


Library of Random Copolypeptides by Solid Phase Synthesis

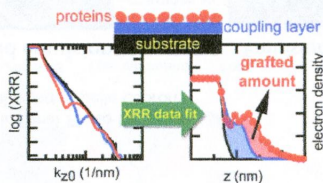
Vladimir Dmitrović, Jos J. M. Lenders, Harshal R. Zope, Gijsbertus de With, Alexander Kros,* and Nico A. J. M. Sommerdijk*

**Single Filament Behavior of Microtubules in the Presence of Added Divalent Counterions**

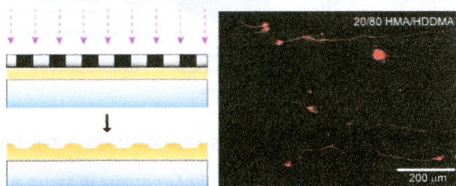
Nathan F. Boussein and George D. Bachand*

**Comparison of the Density of Proteins and Peptides Grafted on Silane Layers and Polyelectrolyte Multilayers**

Olivier Deschaume, Delphine Magnin, Zhe A. Cheng, Colette Douchamps, Pierre Labbé, Sami Yunus, Marie-Christine Durrieu, Bernard Nysten, Karine Glinel, Sophie Demoustier-Champagne, and Alain M. Jonas*

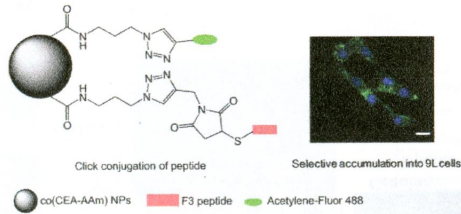
**Material Stiffness Effects on Neurite Alignment to Photopolymerized Micropatterns**

Bradley W. Tuft, Lichun Zhang, Linjing Xu, Austin Hangartner, Braden Leigh, Marlan R. Hansen, and C. Allan Guymon*



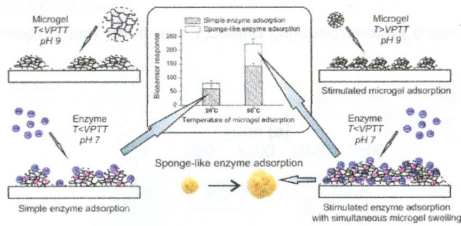
Click Conjugation of Peptide to Hydrogel Nanoparticles for Tumor-Targeted Drug Delivery

Ming Qin, Hong Zong, and Raoul Kopelman*



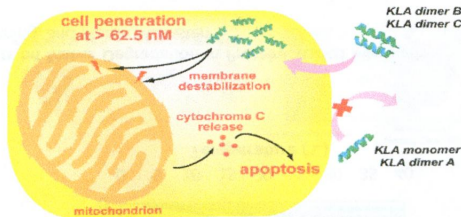
Dual-Stimuli-Sensitive Microgels as a Tool for Stimulated Spongelike Adsorption of Biomaterials for Biosensor Applications

Larisa V. Sigolaeva,* Snezhana Yu. Gladyr, Arjan P. H. Gelissen, Olga Mergel, Dmitry V. Pergushov, Ilya N. Kurochkin, Felix A. Plamper, and Walter Richtering



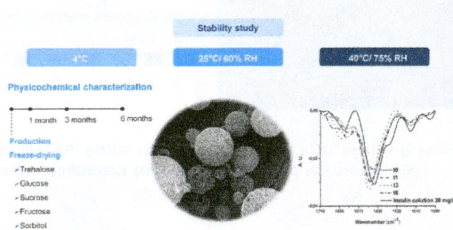
Apoptosis Inducing, Conformationally Constrained, Dimeric Peptide Analogs of KLA with Submicromolar Cell Penetrating Abilities

Soonsil Hyun, Seonju Lee, Seoyeon Kim, Sangmok Jang, Jaehoon Yu,* and Yan Lee*



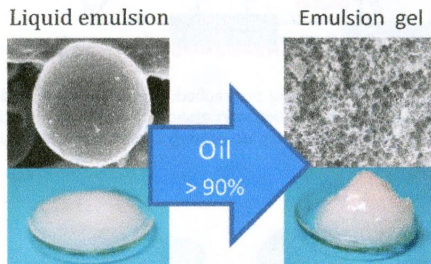
Stability Study Perspective of the Effect of Freeze-Drying Using Cryoprotectants on the Structure of Insulin Loaded into PLGA Nanoparticles

Pedro Fonte, Sandra Soares, Flávia Sousa, Ana Costa, Vítor Seabra, Salette Reis, and Bruno Sarmento*



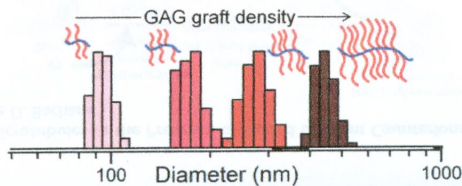
Chitin Nanocrystals for Pickering High Internal Phase Emulsions

Emilie Perrin, Hervé Bizot, Bernard Cathala, and Isabelle Capron*



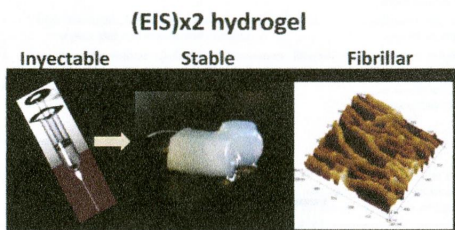
Synthesis and Characterization of Proteoglycan-Mimetic Graft Copolymers with Tunable Glycosaminoglycan Density

Laura W. Place, Sean M. Kelly, and Matt J. Kipper*



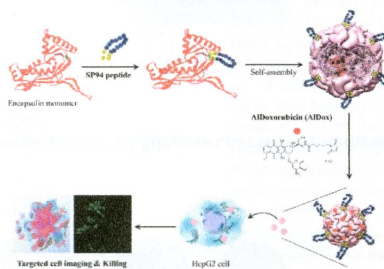
Self-Organized ECM-Mimetic Model Based on an Amphiphilic Multiblock Silk-Elastin-Like Corecombinamer with a Concomitant Dual Physical Gelation Process

Alicia Fernández-Colino, F. Javier Arias, Matilde Alonso, and J. Carlos Rodríguez-Cabello*



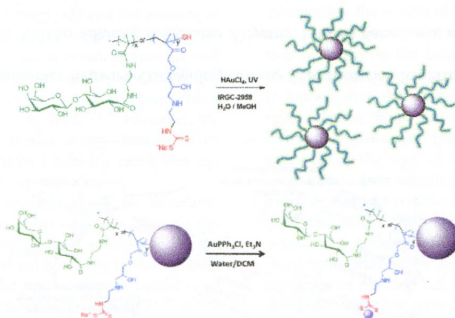
Developing Genetically Engineered Encapsulin Protein Cage Nanoparticles as a Targeted Delivery Nanoplatform

Hyojin Moon, Jisu Lee, Junseon Min, and Sebyung Kang*



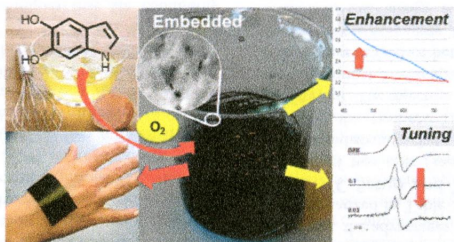
Synthesis and Evaluation of Glycopolymeric Decorated Gold Nanoparticles Functionalized with Gold-Triphenyl Phosphine as Anti-Cancer Agents

Christian K. Adokoh, Stephen Quan, Mary Hitt, James Darkwa, Piyush Kumar, and Ravin Narain*

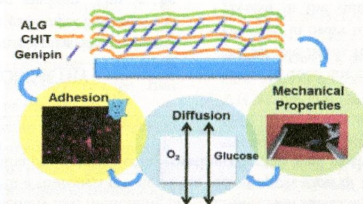


Artificial Biomelanin: Highly Light-Absorbing Nano-Sized Eumelanin by Biomimetic Synthesis in Chicken Egg White

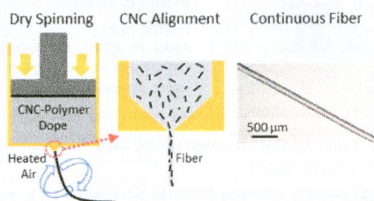
Nicola Fyodor della Vecchia, Pierfrancesco Cerruti, Gennaro Gentile, Maria Emanuela Errico, Veronica Ambrogi, Gerardino D'Errico, Sara Longobardi, Alessandra Napolitano, Luigi Paduano, Cosimo Carfagna, and Marco d'Ischia*

**Tailored Freestanding Multilayered Membranes Based on Chitosan and Alginate**

Joana M. Silva, Ana Rita C. Duarte, Sofia G. Caridade, Catherine Picart, Rui L. Reis, and João F. Mano*

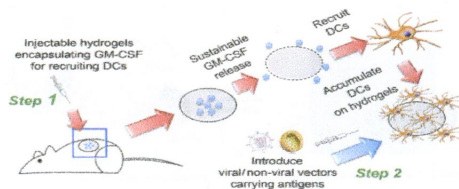
**Effects of Crystal Orientation on Cellulose Nanocrystals—Cellulose Acetate Nanocomposite Fibers Prepared by Dry Spinning**

Si Chen, Greg Schueneman, R. Byron Pipes, Jeffrey Youngblood,* and Robert J. Moon



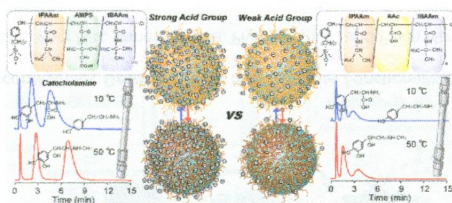
In Situ Modulation of Dendritic Cells by Injectable Thermosensitive Hydrogels for Cancer Vaccines in Mice

Yarong Liu, Liang Xiao, Kye-Il Joo, Biliang Hu, Jinxu Fang, and Pin Wang*



Thermoresponsive Anionic Copolymer Brushes Containing Strong Acid Moieties for Effective Separation of Basic Biomolecules and Proteins

Kenichi Nagase,* Jun Kobayashi, Akihiko Kikuchi, Yoshikatsu Akiyama, Hideko Kanazawa, and Teruo Okano*



Temperature-Controlled Masking/Unmasking of Cell-Adhesive Cues with Poly(ethylene glycol) Methacrylate Based Brushes

Solenne Desseaux and Harm-Anton Klok*

