

# Journal of Materials Chemistry B

Materials for biology and medicine

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See Ming Zhao, Shiqi Peng et al., pp. 6679–6688.  
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## EDITORIAL

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### Bioelectronics: Emerging trends and applications

Anna-Maria Pappa, Eleonora Macchia, Hong Liu and George Malliaras

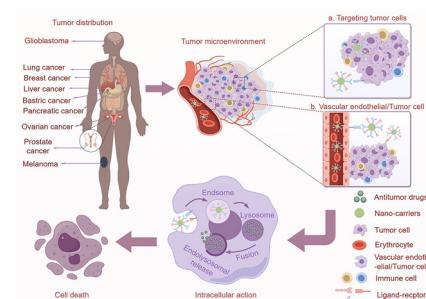


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### A superior method for antitumor therapy and application: dual-ligand nanomedicines

Ailing Wang, Xuejun Wang, Dan Li, Aixue Li, Mengyuan He, Yingying Yuan, Li Ye\* and Jiyong Liu\*



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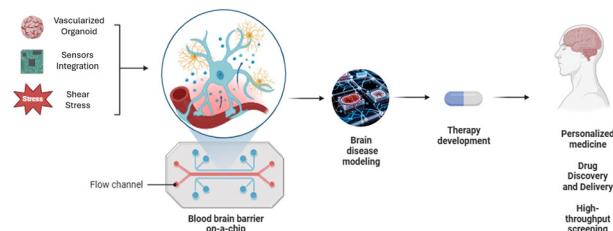


## REVIEWS

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## Recent advances in 3D models for multiparametric blood–brain barrier detection in microfluidic systems

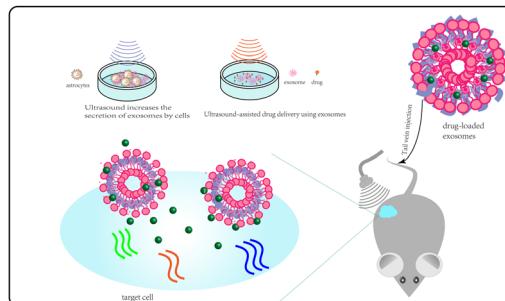
Chiara Boncristiani, Alessia Di Gilio,\* Federica De Castro, Alessandra Nardini, Jolanda Palmisani, Rebeca Martínez Vázquez, Gianluigi de Gennaro, Francesco Paolo Fanizzi, Giuseppe Ciccarella and Viviana Vergaro\*



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## The combined application of exosomes/exosome-based drug preparations and ultrasound

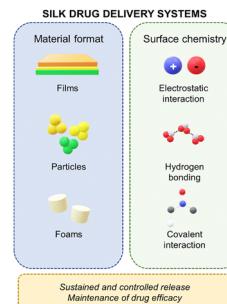
Xiuli Wen and Yi Hao\*



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## Influence of material format and surface chemistry for the sustained delivery and efficacy of silk drug delivery systems *in vivo*

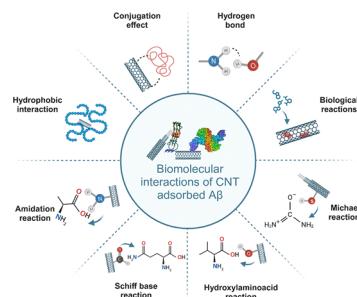
Christine Jurene O. Bacal, Benjamin J. Allardyce\* and Filippo Valente\*



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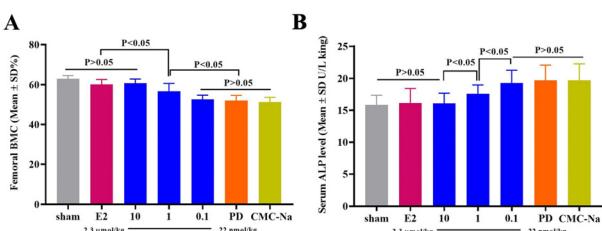
## Biomolecular interactions of carbon nanotubes with amyloid- $\beta$ proteins

Jinxia Cai, Bowen Li, Guoqing Feng, Jie Zhang, Haojun Fan\* and Bin Zheng\*



## PAPERS

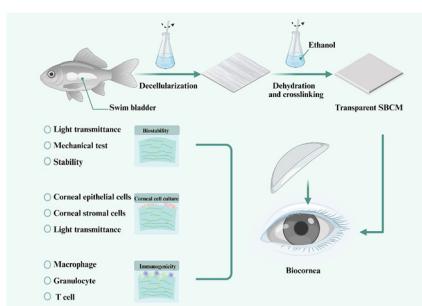
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**PD-E2: a nano-scaled delivery for estradiol to decrease uterus damage and increase bone mineral density**

Qiqi Feng, Hao Gong, Haimei Zhu, Xiaoyi Zhang, Yaonan Wang, Yifan Yang, Jianhui Wu, Ming Zhao\* and Shiqi Peng\*

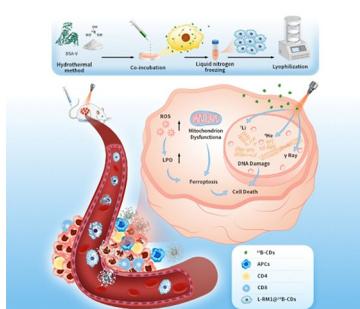
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**Highly transparent and elastic acellular swim bladder with potential application in cornea implantation**

Yue Yin, Linyu Long, Ningxin Wang, Ran Wei, Mengna Guo, Daihua Fu, Fanju Zhang, Ke Ma,\* Li Yang\* and Yunbing Wang

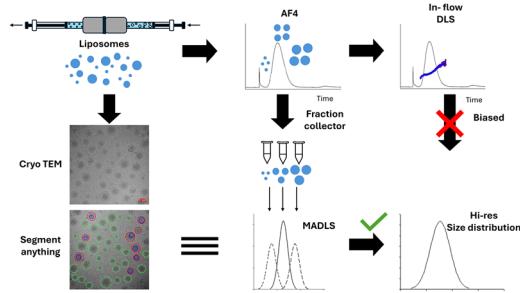
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**Lyophilized tumour cell-loaded  $^{10}\text{B}$ -doped carbon dots for simultaneous boron neutron capture therapy and enhancement of antitumor immunity of prostate cancer**

Yongjin Yang, Zhiyi Zhao, Chengyu You, Miao Pang, Tianyuan Zhong, Qingchao Li, Shiwei Jing, Yanxin Qi,\* Yubin Huang\* and Zhilong Dong\*

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**Going hi-res in bulk: flowless multiangle dynamic light scattering for detection on asymmetric flow field flow fractionation**

Lavinia Rita Doveri, Giorgia Dal Pan, Giovanni Tomaselli, Tomás Muñoz Santoro, Piersandro Pallavicini, Carlos Ortiz de Solorzano and Yuri Antonio Diaz Fernandez\*

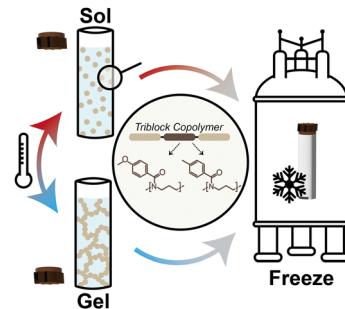


## PAPERS

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**Capturing the sol and gel states of thermoresponsive poly(2-oxazoline)/-(2-oxazine) hydrogels by ambient and subambient solid-state NMR**

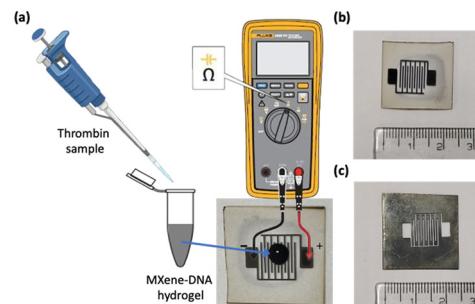
Theresa Zorn, Stephanie Bachmann, Lando Polzin, Johannes Greiner, Robert Luxenhofer and Ann-Christin Pöppler\*



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**A functional 2D MXene–DNA hybrid hydrogel for portable detection of blood disorder biomarker thrombin in human plasma**

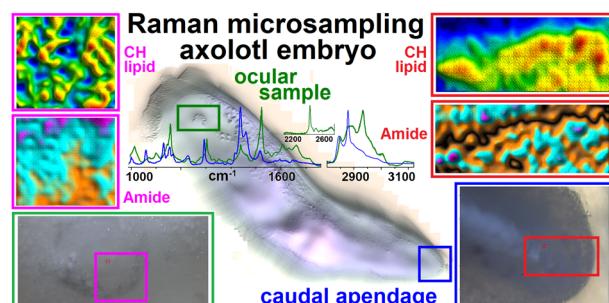
Vinod Morya, Dhiraj Bhatia, Chinmay Ghoroi\* and Amit K. Yadav\*



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**Raman microscopy as a tool to study changes in chemical composition upon structural differentiation of *Ambystoma* embryo**

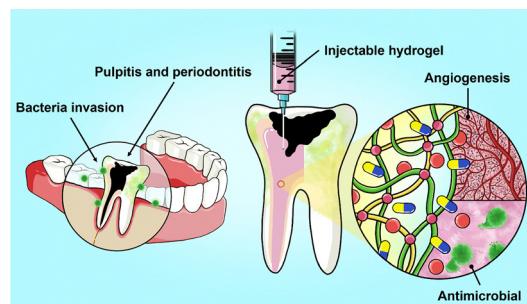
Victor V. Volkov and Carole C. Perry\*



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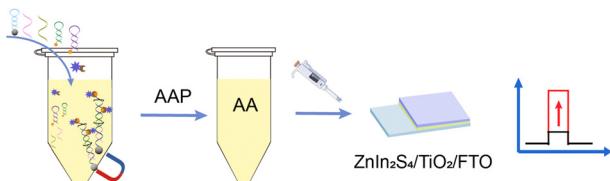
**Dual-functional injectable hydrogels as antimicrobial and angiogenic therapeutics for dental pulp regeneration**

Nhu-Quynh Thi Nguyen, Cuong Hung Luu, Ngoc-Dan Ho Nguyen, Duy Quoc Vo, Ngoc Hong T. Luu, Nhu-Y Ngoc Ha, Thanh-Truc Ngoc Vo, Que-Phuong Le Huynh, Thavasyappan Thambi, Chau T. T. Ngo\* and Giang V. H. Phan\*



## PAPERS

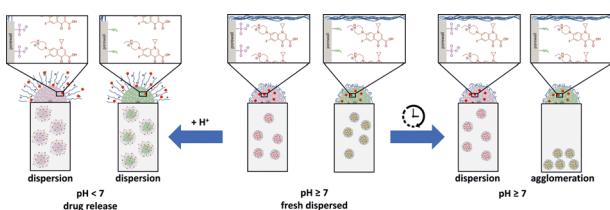
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## Split-type photoelectrochemical biosensing for miRNA-144 assay based on a $\text{ZnIn}_2\text{S}_4/\text{TiO}_2$ heterojunction

Ying Zheng, Fan Mo, Qian Sun, Xinzhou Huang, Yijie Du, Xiaomei An, Haoning Ma, Guoqiu Wu, Yuanjian Zhang and Yanfei Shen\*

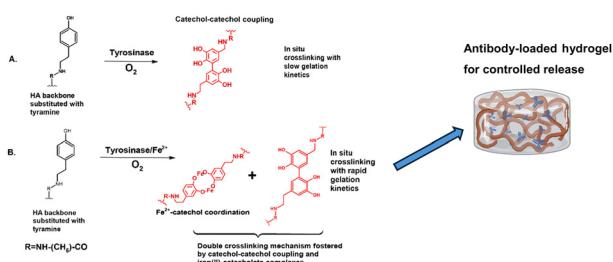
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## Stimuli-responsive core–shell–shell nanocarriers for implant-directed magnetic drug targeting

Timo Herrmann, Nina Angrisani, Janin Reifenrath, Jessica Meißner, Adrian Hannebauer, Lukas Mönkeberg, Valentin Hagemann, Irene Morales, Peter Behrens, Nina Ehlert\* and Sebastian Polatz\*

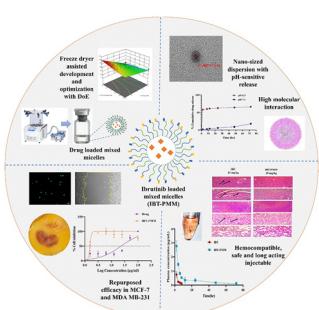
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## Iron(II)-catalysed tyrosinase crosslinked hyaluronic acid hydrogel for the controlled release of human antibodies

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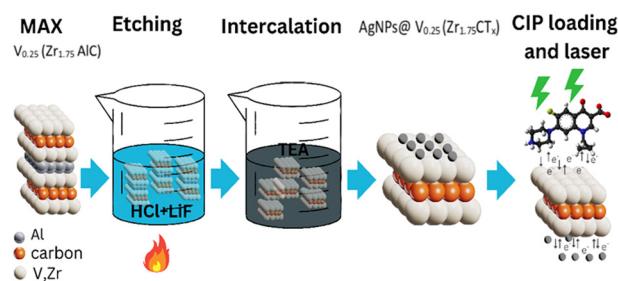


## PAPERS

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**Tailoring the synthesis of  $V_{0.25}(Zr_{1.75})C$  MXene for sensitive SERS quantification of ciprofloxacin antibiotics: spectroscopic and DFT investigation**

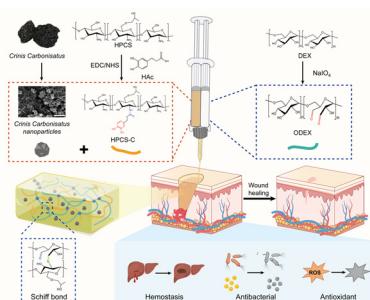
Nasurullah Mahar, Areej H. Al-Mebti, Sajjad Hussain and Abdulaziz A. Al-Saadi\*



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**Injectable self-healing hydrogels loaded with Crinis Carbonisatus nanoparticles for rapid hemostasis and wound healing**

Rui Tian, Fazhen Luo, Yilin Yu, Jinxia Mi, Xiaoya Gao, Zhengtao Wang\* and Yan Xie\*



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**Rational design of near-infrared carbon dots as polarity-sensitive fluorescent probes for imaging of lipid droplets**

Zheng Yang,\* Ying Peng, Mengyao Qu, Haonan Yang, Xiaodan Jia and Xiangrong Liu

