

# RSC

## Applied Polymers

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### IN THIS ISSUE

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#### Cover

See Henrik Strand, Mari-Ann Einarsrud *et al.*, pp. 530–542.

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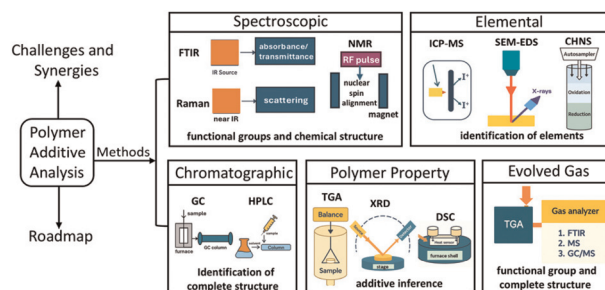
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### REVIEWS

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#### Detection, identification, and quantification of polymer additives: a review of techniques, approaches, challenges, and a possible roadmap in analysis

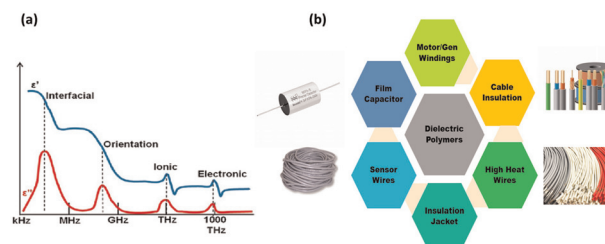
Tanmay Rahman, Daniel Meadows, Ke Zhan, Harrish Kumar Senthil Kumar, Marshall Smith, Virginia A. Davis, Bryan S. Beckingham, Yucheng Peng and Edward Davis\*



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#### Unlocking high-performance capacitive energy storage: advances in polymer nanocomposite dielectrics

Tanuj Kumar,\* Rahul Singhal, Ramesh Kumar, Arunima Verma, Priya Jasrotia, Arun Kumar, Rajeev Gupta, Ajay Singh Verma, Priyankaben Trivedi and Manju Bala



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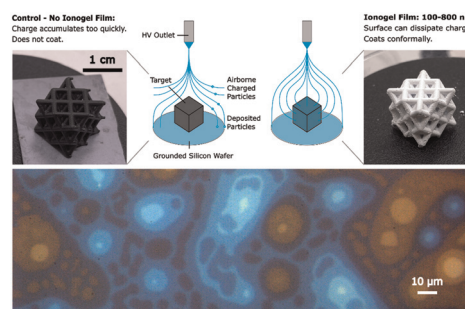


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### Ionogel thin films as a compatibilizing pretreatment for electrospray deposition

Tejasvi Venkat, Hannah Mow, Emily Li, Weronika Wasniowska, Ayman Rouf, Noah M. McAllister, Zainab Al-Jaleel and Jonathan P. Singer\*

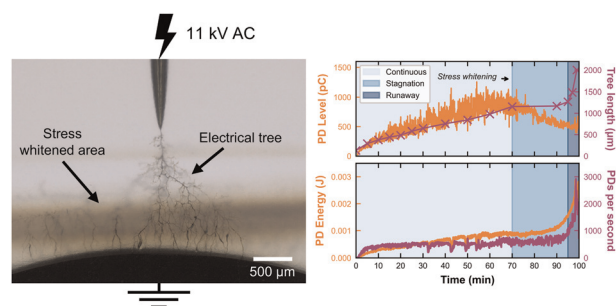


## PAPERS

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### Electrical treeing in stress-whitened polypropylene thermoplastic elastomer cable insulation

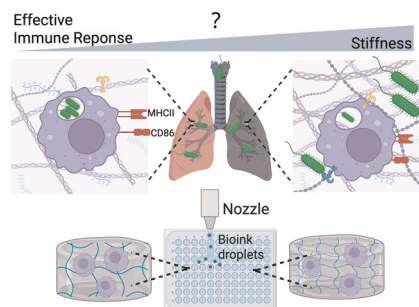
Henrik Strand,\* Jorunn Hølto, Sverre Hvidsten and Mari-Ann Einarsrud\*



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### High-throughput bioprinted 3D cultures for probing host–pathogen interactions in bioinspired microenvironments

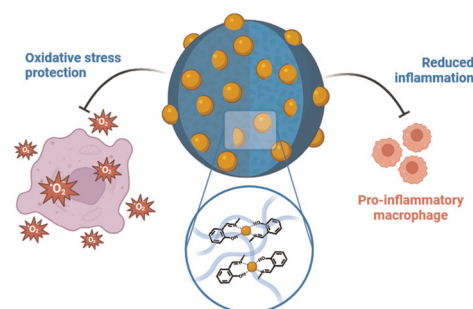
Jodi Graf,\* DeVonte Moore,\* Catherine L. Grimes, Catherine A. Fromen and April M. Kloxin



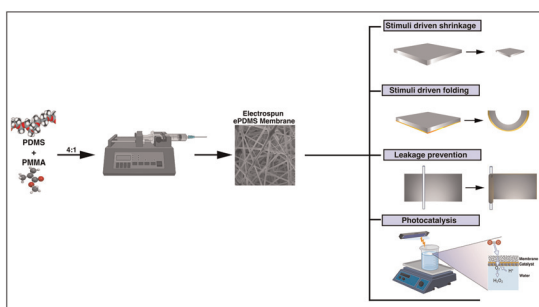
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### Biodegradable copper complexing polymeric microparticles relieve oxidative stress

Laurel Zhang, Cole Latvis, Xiaokun Jiang, Yadong Wang\* and Simon Van Herck\*



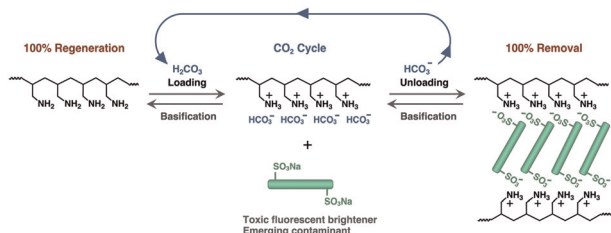
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## Multifunctional flexible electrospun polydimethylsiloxane (ePDMS) membranes for soft robotics applications and photocatalytic conversion platforms

I. R. Reshma, Gokula Nathan Kasinathan, Akshay Tikoo, Praveen Meduri, Subha Narayan Rath\* and Shourya Dutta-Gupta\*

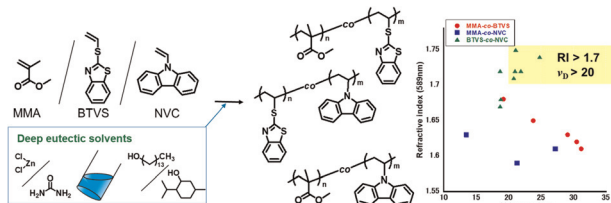
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## Effective and sustainable removal of a model fluorescent brightener using bicarbonate-loaded polyelectrolytes in a closed-loop CO<sub>2</sub> cycle

Eri Yoshida

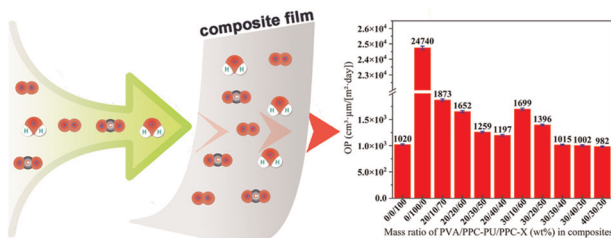
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## High-refractive-index copolymers produced by radical copolymerization of aromatic heterocyclic monomers in deep eutectic solvents

Yuji Tsuchida, Kento Sato, Sadaki Samitsu and Hideharu Mori\*

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## Preparation, characterization and properties of PPC-based fully biodegradable ternary blends for sustainable packaging application

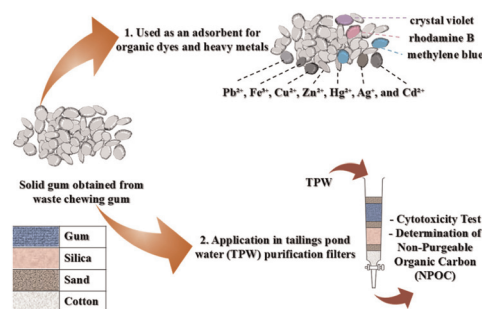
Yong Chen,\* Yang Zhao, Min Xiao and Yue-Zhong Meng



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## Application of chewed gum for treating oil sands tailings and adsorbing organic dyes and heavy metal ions

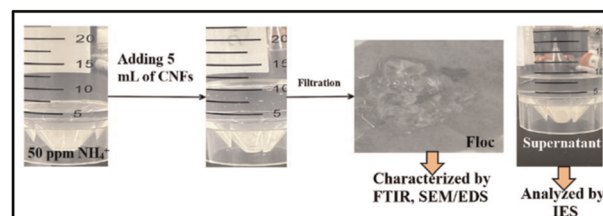
Wei Zhang, Amirhossein Farshchi-Andisi, Maryam Salami\* and Michael J. Serpe\*



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## Functionalized nanocellulose for efficient removal of ammonium impurities from contaminated water

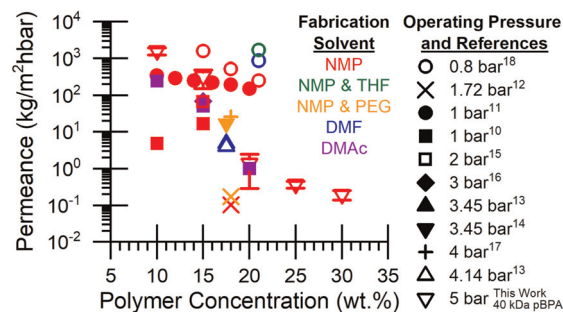
Priyanka Sharma,\* Eyad Mohammed A. Alfarsi, Stanley C. Hicks, Miles Anthony Miller, Saikumar Muddapu, Abbygale Razalind Ruggiero, William Borges, Julian J. Koebbe, Michael Kahwaji, Anindya K. Swarnakar and James Springstead



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## The effect of Bisphenol A vs. Bisphenol F on the performance of polysulfone membranes

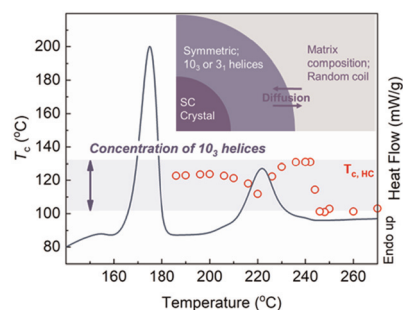
Taysha Telenar, Rowen Sadlier, Kelly Nguyen, Alexis Powell, Oshio Oyageshio and Matthew D. Green\*



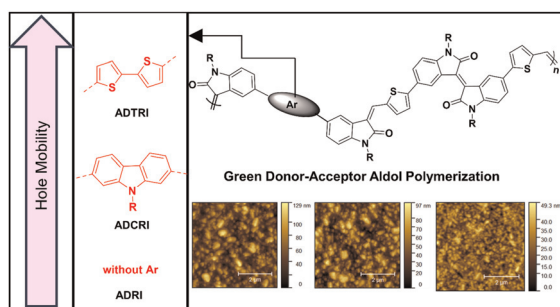
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## Understanding nucleation efficiency of stereocomplex-crystallites on homochiral crystallization in poly(L-lactide)/poly(D-lactide) blends: homogenization near crystal growth front

Qi Chen, Mansurali Mithani, Rafael Auras, Jacob Judas Kain Kirkensgaard and Ilke Uysal-Unalan\*



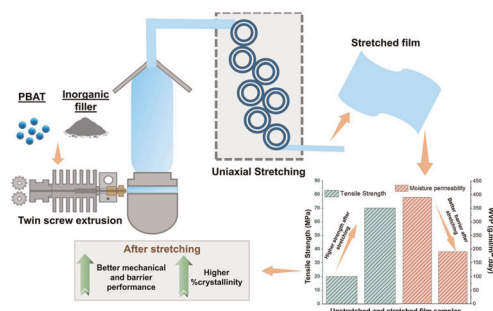
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### Synthesis and study of donor–acceptor conjugated polymers based on isoindigo units via a metal-free aldol polymerization strategy

Prerak R. Patel, Mayur J. Patel, Parameswar K. Iyer,\*  
Sanjio S. Zade\* and Arun L. Patel\*

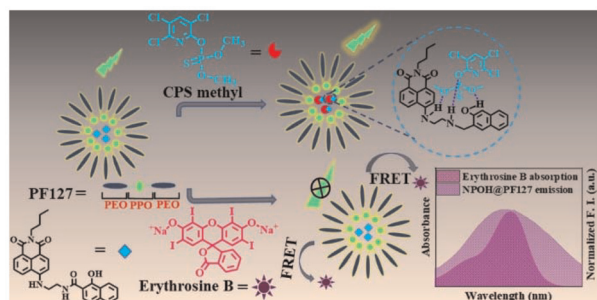
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### Study of uniaxially stretched single-layer and multi-layer blown films based on poly(butylene adipate-co-terephthalate) and inorganic fillers for food and agriculture applications

Debarshi Nath, Matias Menossi, Ehsan Pesaranhajiabbas,  
Michael R. Snowden, Amar K. Mohanty\* and  
Manjusri Misra\*

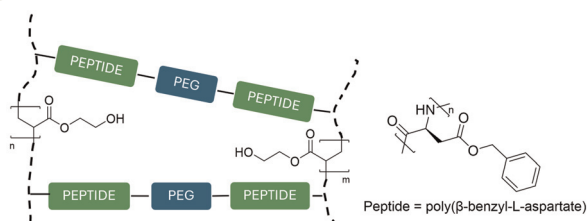
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### Harnessing 1,8-Naphthalimide based amide capped with Pluronic F127 micelles for the detection of chlorpyrifos methyl and erythrosine B

Nisha Jain and Navneet Kaur\*

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### Peptide-reinforced, photocrosslinkable PEG-based hydrogels

Sam Russell, Daseul Jang, Jessica Thomas,  
Patrick Grysan, Linus Sprandl, Markus Biesalski,  
LaShanda T. J. Korley and Nico Bruns\*

#### Peptide-Reinforced PEG-based Conetworks:

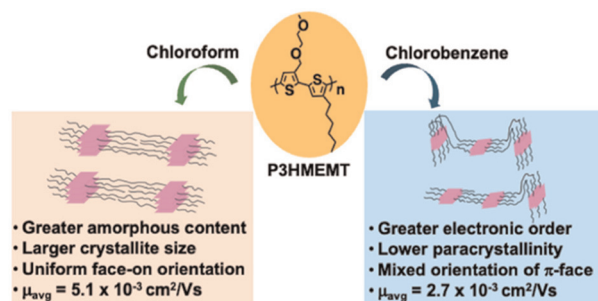
- ✓ UV-crosslinkable monomer mixture
- ✓ Swellable in water → Hydrogels
- ✓ Improved mechanical properties



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### Chloroform outperforms chlorobenzene for enhanced mobility in amphiphilic polymer OFETs

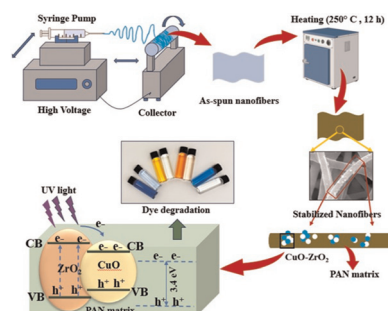
Preeti Yadav, Shunsuke Yamamoto, Kodai Yamanaka, Hengyuan Wang, Nadège Bonnet, Yabing Qi, Itaru Osaka and Christine K. Luscombe\*



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### Recyclable and eco-compatible polymer composite nanofibers for broad-spectrum dye remediation

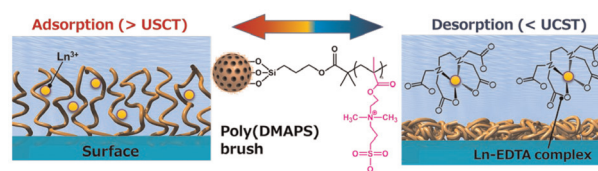
Kritika Rajput, Jesus Vazquez Chavez, Ana B. Jorge Sobrido, Manish Dev Sharma and Colin R. Crick\*



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### Development of an adsorption–desorption technique for the recovery of rare-earth metal ions using the phase transition behavior of zwitterionic polymer brushes

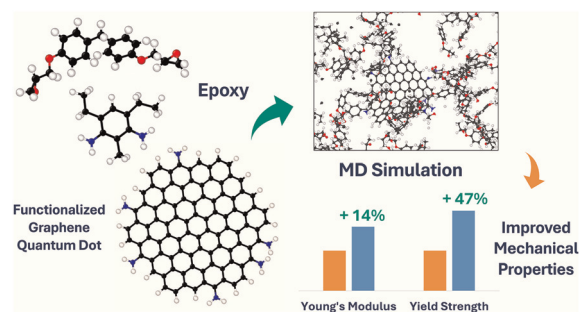
Tommy Suhartono Wijaya Tan, Naokazu Idota and Takehiko Tsukahara\*



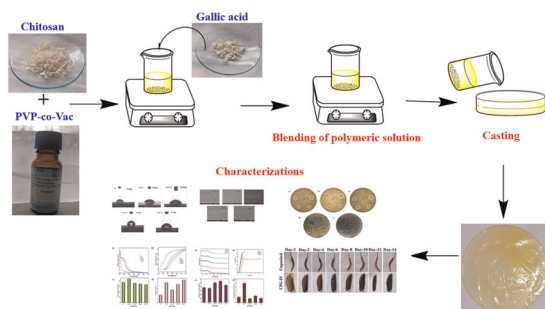
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### Enhancing the mechanical properties of epoxy with graphene quantum dots: a molecular dynamics study

Swapnil S. Bamane,\* Prathamesh P. Deshpande, Folarin Erogbogbo and Ozgur Keles



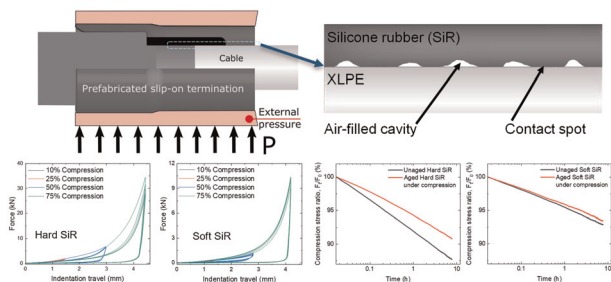
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### Fabrication of gallic acid crosslinked chitosan/poly(1-vinylpyrrolidone-co-vinyl acetate) antioxidant films for green chilli packaging

Bhagyalakshmi A. Sheeparamatti, Priyanka Baburao, Priyadarshini, Shiddalingesh G. Havanur, Ravindra B. Chougale,\* Manjushree Nagaraj Gunaki, Ajitkumar Appayya Hunashyal, Saraswati P. Masti, Nagarjuna Prakash Dalbanjan and S. K. Praveen Kumar

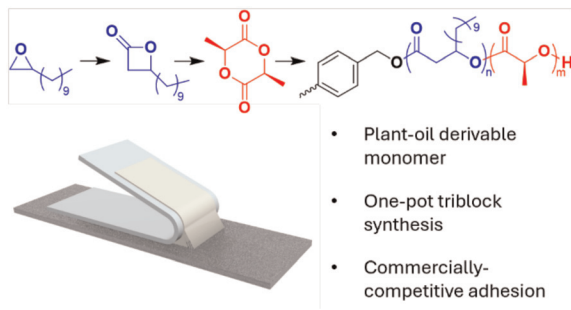
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### Accelerated ageing of silicone rubber and XLPE used in HV cable accessories: a thermomechanical analysis

Oscar Kayanja, Emre Kantar, Svein M. Hellesø, Julia Glaum, Sverre Hvidsten and Mari-Ann Einarsrud\*

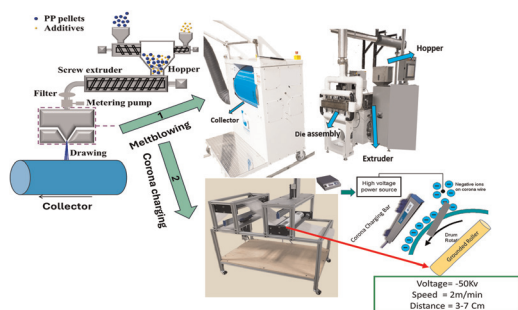
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### Polyhydroxyalkanoate block polymer adhesives derived from long-chain aliphatic $\beta$ -lactones and lactide

Peter V. Kelly, Alison Block, Brenden D. Hoehn, Pathikrit Saha, Christopher J. Ellison\* and Marc A. Hillmyer\*

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### Effect of corona charging, additives and processing conditions on the barrier and filtration properties of polypropylene melt-blown

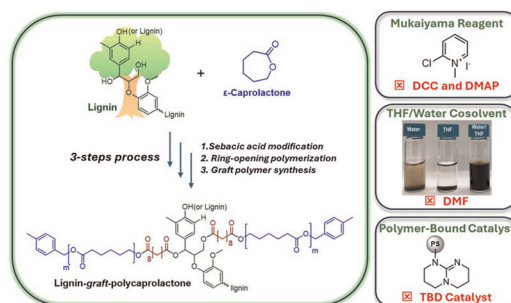
Partha Sikdar\* and Gajanan S. Bhat



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## Sustainable synthesis methods of lignin-based copolymers: recyclable non-carbodiimide catalytic systems in aqueous solvent

Christian Gonzalez, Arijit Ghorai and Hoyong Chung\*



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## Impact of $\pi$ -conjugation and fluorination on the sensing performance of 1,6-pyrene covalent triazine frameworks

M. Carmen Borrallo-Aniceto, Beatriz Fuerte-Díez, Laura González-Aguilera, M. Luisa Ferrer, M. Pilar Lillo, Andreas Mavrandonakis, Urbano Díaz, Eva M. Maya\* and Marta Iglesias\*

