

**Special Issue: Manufacturing of Advanced  
Biodegradable Polymeric Components**

**Guest Editors:** Prof. Roberto Pantani (University of Salerno) and  
Prof. Lih-Sheng Turng (University of Wisconsin-Madison)

**EDITORIAL**

**Manufacturing of advanced biodegradable polymeric components**

R. Pantani and L.-S. Turng, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42889](https://doi.org/10.1002/app.42889)

**REVIEWS**

**Heat resistance of new biobased polymeric materials, focusing on starch, cellulose, PLA, and PHA**

N. Peelman, P. Ragaert, K. Ragaert, B. De Meulenaer, F. Devlieghere and Ludwig Cardon, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42305](https://doi.org/10.1002/app.42305)

**Recent advances and migration issues in biodegradable polymers from renewable sources for food packaging**

P. Scarfato, L. Di Maio and L. Incarnato, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42597](https://doi.org/10.1002/app.42597)

**3D bioprinting of photocrosslinkable hydrogel constructs**

R. F. Pereira and P. J. Bartolo, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42458](https://doi.org/10.1002/app.42458)

**ARTICLES**

**Largely toughening biodegradable poly(lactic acid)/thermoplastic polyurethane blends by adding MDI**

F. Zhao, H.-X. Huang and S.-D. Zhang, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42511](https://doi.org/10.1002/app.42511)

**Solubility factors as screening tools of biodegradable toughening agents of polylactide**

A. Ruellan, A. Guinault, C. Sollogoub, V. Ducruet and S. Domenek, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42476](https://doi.org/10.1002/app.42476)

**Current progress in the production of PLA-ZnO nanocomposites: Beneficial effects of chain extender addition on key properties**

M. Murariu, Y. Paint, O. Murariu, J.-M. Raquez, L. Bonnaud and P. Dubois, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42480](https://doi.org/10.1002/app.42480)

**Oriented polyvinyl alcohol films using short cellulose nanofibrils as a reinforcement**

J. Peng, T. Ellingham, R. Sabo, C. M. Clemons and L.-S. Turng, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42283](https://doi.org/10.1002/app.42283)

**Biorenewable polymer composites from tall oil-based polyamide and lignin-cellulose fiber**

K. Liu, S. A. Madbouly, J. A. Schrader, M. R. Kessler, D. Grewell and W. R. Graves, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42592](https://doi.org/10.1002/app.42592)

**Dual effect of chemical modification and polymer precoating of flax fibers on the properties of the short flax fiber/poly(lactic acid) composites**

M. Kodal, Z. D. Topuk and G. Ozkoc, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42564](https://doi.org/10.1002/app.42564)

**Effect of processing techniques on the 3D microstructure of poly (L-lactic acid) scaffolds reinforced with wool keratin from different sources**

D. Puglia, R. Ceccolini, E. Fortunati, I. Armentano, F. Morena, S. Martino, A. Aluigi, L. Torre and J. M. Kenny, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42890](https://doi.org/10.1002/app.42890)

**Batch foaming poly(vinyl alcohol)/microfibrillated cellulose composites with CO<sub>2</sub> and water as co-blowing agents**

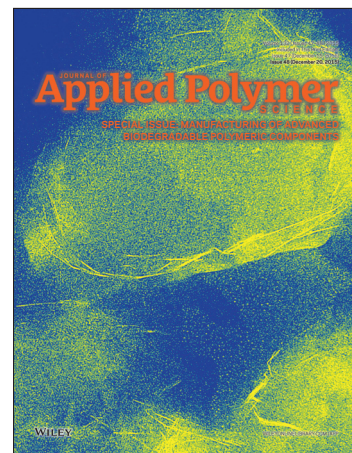
N. Zhao, C. Zhu, L. H. Mark, C. B. Park and Q. Li, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42551](https://doi.org/10.1002/app.42551)

**Foaming behavior of biobased blends based on thermoplastic gelatin and poly(butylene succinate)**

M. Oliviero, L. Sorrentino, L. Caferio, B. Galzerano, A. Sorrentino and S. Iannace, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42704](https://doi.org/10.1002/app.42704)

**Reactive extrusion effects on rheological and mechanical properties of poly(lactic acid)/poly[(butylene succinate)-co-adipate]/epoxy chain extender blends and clay nanocomposites**

A. Mirzadeh, H. Ghasemi, F. Mahrous and M. R. Kamal, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42664](https://doi.org/10.1002/app.42664)



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**Rotational molding of biodegradable composites obtained with PLA reinforced by the wooden backbone of opuntia ficus indica cladodes**

A. Greco and A. Maffezzoli, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42447](https://doi.org/10.1002/app.42447)

**Foam injection molding of poly(lactic) acid: Effect of back pressure on morphology and mechanical properties**

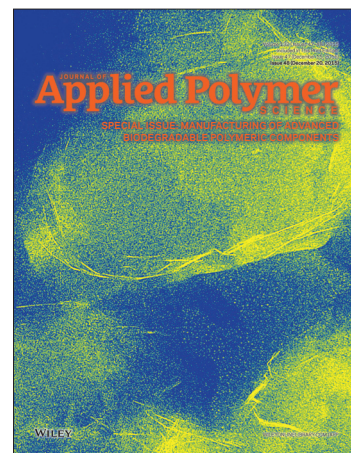
V. Volpe and R. Pantani, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42612](https://doi.org/10.1002/app.42612)

**Modification and extrusion coating of polylactic acid films**

H.-Y. Cheng, Y.-J. Yang, S.-C. Li, J.-Y. Hong and G.-W. Jang, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42472](https://doi.org/10.1002/app.42472)

**Processing and properties of biodegradable compounds based on aliphatic polyesters**

M. R. Nobile, P. Cerruti, M. Malinconico and R. Pantani, *J. Appl. Polym. Sci.* 2015, DOI: [10.1002/app.42481](https://doi.org/10.1002/app.42481)



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