

Editorial

Advances in science and technology of polymers and composite materials

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Polymers are one of the few modern man-made substances that can be used as matrix for the fabrication of composite and nanocomposite materials. They can incorporate a wide range of products, like metals, ceramics and carbon, in the form of particles or fibers that improve the original physical and/or chemical properties of the polymer.

The area of polymers science and technology has been growing intensively during the last years, especially with the development of new techniques to create composites and nanocomposites. An idea of the growth can be reflected through the increasing number of patents and publications through the years. A research on the database Google Scholar using just the keywords “polymers” and “nanocomposite polymers” display an explosive number of publications (Figure 1). According to the database, in the period 2001–2016, about 1.45 million articles have included the word polymer. A search in the area of patents shows that 2,20,000 patents in all the world included this word.

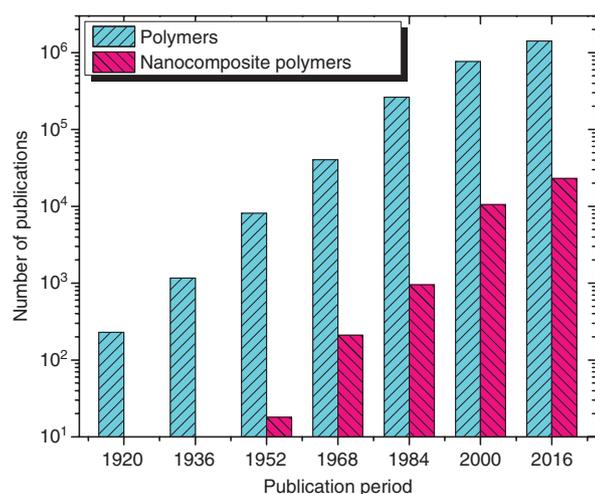


Figure 1: Number of published articles using the keywords “polymers” and “nanocomposite polymers.” The information was retrieved from the database Google Scholar on 16/10/2017. Each column represents the number of articles during the previous 16 publication years.

The present issue of the journal *e-Polymers* contains 12 specially selected manuscripts submitted to the 2017 Global Conference on Polymer and Composite Materials (PCM2017), which was held in Guangzhou, China, during May 23–25, 2017. Following previous successful conferences in Ningbo, Beijing (1) and Hangzhou (2), the technical program in 2017 consisted of four international keynote speakers, invited speakers, oral presentations in two parallel sessions and a poster session. The electronic submission and handling of manuscripts were identical to the procedures applied to manuscripts submitted as regular contributions for publication in *e-Polymers*.

The selected papers in this issue highlight current topics in the area of polymers and polymer composites, such as novel synthesis methods; their electrical, mechanical and thermal properties; reaction kinetics; cure reactions; novel polymer composites with graphene; as well as advances in characterization and modeling thereof.

References

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2. Broitman E. Innovations in polymers and composite materials. *e-Polymers*. 2016;17(1):1.



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