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Sommario/riassunto	The market is continuously looking for substitutes for expensive polymers or tailor made polymers for specific applications. Therefore, polymer blends are gaining more interest since they possess a great potential to fulfill these needs. Blending not only results in better final properties, but can also improve the processing behavior and reduce costs. In the field of polymer blends, there are numerous parameters that influence the morphology, e.g., viscosity ratio, blend composition, shear conditions, and blend ratio. There is still a great deal of potential to scientifically exploit the possibilities of blend technology, which is necessary to obtain a foundation based on science, engineering, technology, and applications in order to make it possible to tailor polymer blends as desired.However, combining two or more different polymers to receive favorable properties by blending often results in immiscible polymer blends. This immiscibility goes hand-in-hand with phase separation leading to weak mechanical properties. The high interfacial tension causing this can be reduced by compatibilization of polymer blends. There are different methods to achieve this, such as adding block and graft copolymers, reactive polymers to form block and graft copolymers, nanoparticles or organic molecules. Using suitable compatibilizers, not only is the interfacial adhesion between matrix and its blends reduced, but also the dispersion of the dispersed phase is improved, the adhesion between the phases is enhanced and the morphology is stabilized. This can lead to improved mechanical and

morphological properties.Designing new polymer blends or improving the properties of immiscible polymer blends by compatibilization is very challenging, but an excellent way to exploit the full potential of polymers for applications and their varied needs.This Special Issue is a source of information on all recent aspects of polymer blend technology.