

Editorial



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Biotechnology has become an important area for the production of smart materials under environmentally friendly conditions. On the one hand, microorganisms can produce polymers where novel strategies in biotechnology allow tuning of their composition and consequently their properties. On the other hand, enzymes are increasingly used both to replace toxic chemicals in processing of materials as well as for targeted surface modification. The detailed characterization of microbial polymers and the screening for their producers is an important aspect in this context which is therefore carefully reviewed in this issue for the most promising candidates (e.g. polyhydroxyalcanoates, PHAs). In another contribution, cheap substrates for the pro-

duction of microbial polymers such as fermentation effluents have been evaluated. In terms of the perspective applications of these materials, the potential of PHAs for Peripheral Nerve Regeneration has been assessed in this issue. For what concerns polysaccharides, other authors have investigated the photoprotective and antioxidant properties of chitosan containing nanoemulsions. Apart from giving access to important medical and cosmetic applications, biotechnology is gaining increasing importance in bulk fiber processing. Here examples are given related to the exploitation of novel fibres from bamboo obtained via enzymatic retting. In turn, textiles can serve as excellent carriers for enzyme immobilization.

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Sincerely,

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