

Unit 5 Materials Research: Today and Future

The future of the business in polymeric materials is influenced to a large extent by three factors: macro-trends in society, developments in science and technology and the outcome of the present turmoil in the chemical industry.

to a large extent 在很大程度上

译文：在聚合材料方面的市场的未来很大程度上受三个因素的影响：社会的宏观趋势，科学与技术的发展和目前化学工业中变动的成果。

Looking at the future needs of the society, it is expected that an increasing pressure will be exerted in the next decades by the society at large on the chemical industry, to come to a higher level of sustainability. The development of really sustainable products and processes will become more and more important.

look at.....

it is expected that.....

译文：纵观社会将来的需求，有人预料，由社会给化学工业带来的越来越多的压力将在随后几十年间将显露出来，将到达一个很高的水平并持续下去。真正的可持续的产品和工艺的发展将变得越来越重要。

On the other hand, the most striking development in material science and technology is an ever increasing control on the molecular and the supramolecular level, up to the nano length scale. The interest of polymer scientists has shifted from new monomers and their (co) polymers towards functional and smart materials, resulting from the mimicking of the perfect control of macromolecular structure and function as found in nature. It is expected that these developments will provide the solutions for more sustainable products and process.

另一个方面，在材料科学与技术中最显著的发展是不断的增加对分子水平，超分子水平，一直到纳米尺度的操控的能力。聚合物科学家的兴趣已经从新的单体和它们的共聚物转移到功能材料和智能材料，结果就出现了熟练的调控大分子结构和功能的模拟手段，这些大分子是在自然界中发现的。有人预料，这些发展将带来更多为开发可持续的产品和工艺的解决办法。

The third factor is a thorough reshuffling of the activities in the chemical industry. The position of the “advanced materials” in this redistribution is not clear. It might even happen that a substantial part of this business disappears from the chemical industry toward for instance the electronic industry.

第三个因素是在化学工业中的活动的一个彻底的改组。先进材料在这个再分布中的位置不明显。市场的实质部分从化学工业中消失，并转向电子工业的时候，它可能正好发生。