

# Monomers, Oligomers, Polymers, Composites and Nanocomposites Research

*Synthesis, Properties and Applications*

*Richard A. Pethrick*  
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*Editors*

NOVA



# **MONOMERS, OLIGOMERS, POLYMERS, COMPOSITES AND NANOCOMPOSITES RESEARCH: SYNTHESIS, PROPERTIES AND APPLICATIONS**

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**MONOMERS, OLIGOMERS, POLYMERS,  
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RESEARCH: SYNTHESIS, PROPERTIES  
AND APPLICATIONS**

**RICHARD A. PETHRICK,  
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## PREFACE

“In a country that is ruled well, it is a shame to be poor, but in a country that is lead poorly, it is a shame to be wealthy.”  
Confucius - circa 557-479 B.C.

“The future of the world is in the hands of teachers”  
Victor Hugo – 19<sup>th</sup> century

Knowledge – the hallmark of a flourishing country and mankind. “In the olde world, the wealthiest country was the one who had the wealthiest land, while in today’s modern world, the wealthiest country is the one who has the most diverse population. “ (Prof. G. Bokle, England) Knowledge is the foundation for mankind’s most successful ventures. Today there is a visible shift in science, where people have shifted from chemistry to biology, and from biology to medicine. Everybody wishes to be wealthy and healthy. Jonathan Swift once said, “Everybody wants to live longer but no body wants to be old.”

Still, the role of polymer chemistry (pure and applied sciences) is very prominent in the world of science today, but it is heading away from polymers and polymer blends towards composites and nanocomposites. It allows for the creation of new materials with unique properties and new possibilities.

If we measure the world’s production of materials by volume and not by weight, then we find that it equals the production of iron, cast, steel, and colored metals together. This volume equals 250-270 million cubic metric of material per year. It is important to note that the rate of production of polymers is overcoming the rate of production of metals by 30-40%. Mankind used to live in the Stone Age, then the Iron Age, then the Bronze Age, and now it has come to be the Age of Polymers (leaning heavily towards composites and nanocomposites.)

There are reviews and essays, according to the opinions of editors, that are helping to further develop polymer science and assist in solving practical applications (new materials with improved properties).

Finally we would like to tell you a little joke with serious conclusion.

One American gentleman visited Poland in time of Polish People’s Republic (1980<sup>th</sup>) and he saw that everywhere it is located two Flags: Polish and Soviet.

American asked one Polish gentleman: “Are you friends with Soviet Union peoples or brothers?”

Polish replied: “We are definitely brothers because we can choose friends!”

So, the contributors of our Handbook are not brothers and not friends of editors of this volume. We selected this people on the base of good scientific results of these scientists.

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