

More than 40 years research on (bio)polymers – DNA the ‘star’ among the biomolecules and RNA the ‘magic molecule’

Peter Schuster

Institute for Theoretical Chemistry, University of Vienna,

Währingerstraße 17, 1090 Wien, Austria

E-mail: `pks@tbi.univie.ac.at`

Soon after the correct proposal of the structure of DNA by Watson and Crick in 1952 theoretical chemists and physicists became interested in and were fascinated by the special properties of nucleic acid molecules. Today DNA and RNA structures and functions represent the core of molecular genetics and a unique story of astonishing discoveries goes like Ariadne's red thread from the early days of electronic structure calculations to present day bioinformatics and systems biology. The talk will focus on nucleic acid structure and function in biology that can be directly derived from it.