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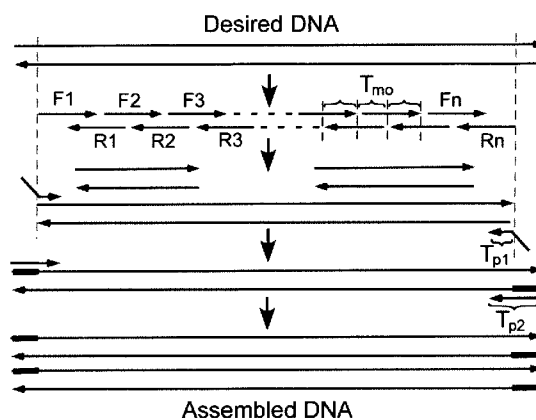


Figure 1

(57) Abstract: The present invention relates to polymerase chain reaction (PCR)-based methods for the one-step synthesis of nucleic acid molecules, wherein the amplification primers used in said methods are designed such that they have two distinct melting temperatures in order to minimize the competition between polymerase cycling assembly (PCA) and polymerase chain reaction (PCR) amplification in the one-step nucleic acid synthesis and to maximize the emerging full-length amplification, as well as kits for use in such methods.