

Having a picture in mind of what is happening within the growing Parylene coating is of vital importance when designing new Parylene applications or troubleshooting existing processes when they fall short of expectations. Not the least of the problems faced in developing this picture is the highly reactive nature of the monomer, a p-xylylene, rendering the gathering of physical properties by conventional measurements all but impossible. It has been 30 years since a steady state model for the process was made public. In the interim, slow but steady progress has been made using numerical techniques to explore the early stages of the Parylene process. One outcome is an appreciation of the influence of substrate characteristics on Parylene coating adhesion. These computational methods will be discussed, as will an emerging general microscopic picture of the Parylene coating process.