The technique and procedure for epitaxial growth of III-V compounds of molecular beam epitaxy (MBE) is described. The unique feature of MBE is the control of film thickness and compositional profiles. A reproducible thickness control of 5Å is achieved during the growth of superlattice structures. (The SCI® indicates that this paper has been cited in over 390 publications since 1975.)

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The request by the Institute for Scientific Information® to write a commentary for Citation Classics about the article “Molecular beam epitaxy,” which was published in Progress in Solid-State Chemistry, led me to ponder why some of my papers have been cited more often than others. In general, authors prefer to reference their own work because it is what they are most familiar with. In order to be referenced, a paper should include useful information such as numbers, equations, and experimental procedures. Most importantly, it should be first in the field.

In 1974 when we were asked to write the review article on molecular beam epitaxy (MBE), we decided to describe the technology from its inception to the state-of-the-art results. We included all the published articles on this subject and listed them in chronological order at the end of the paper. This was still possible then, but it would be impossible in 1985.