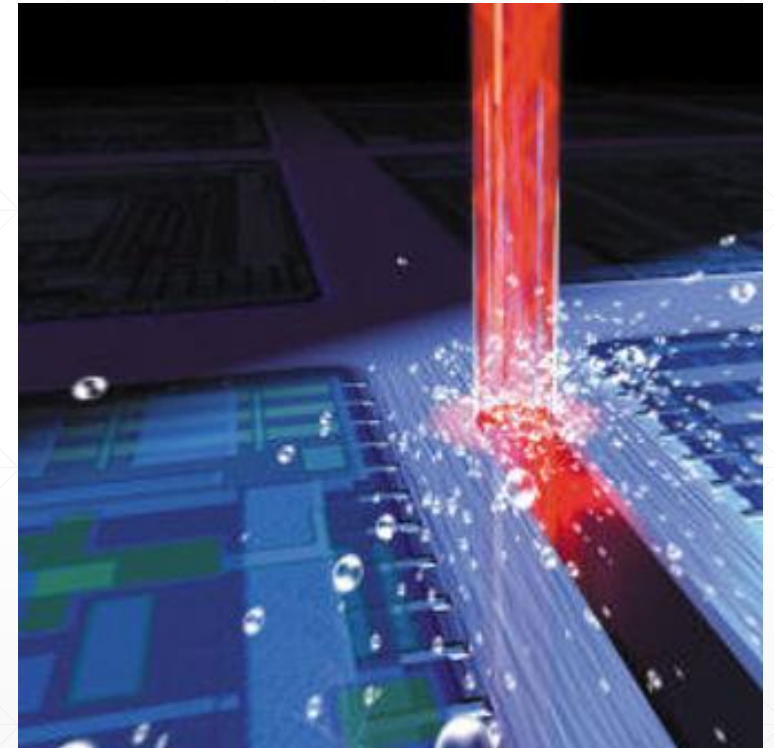
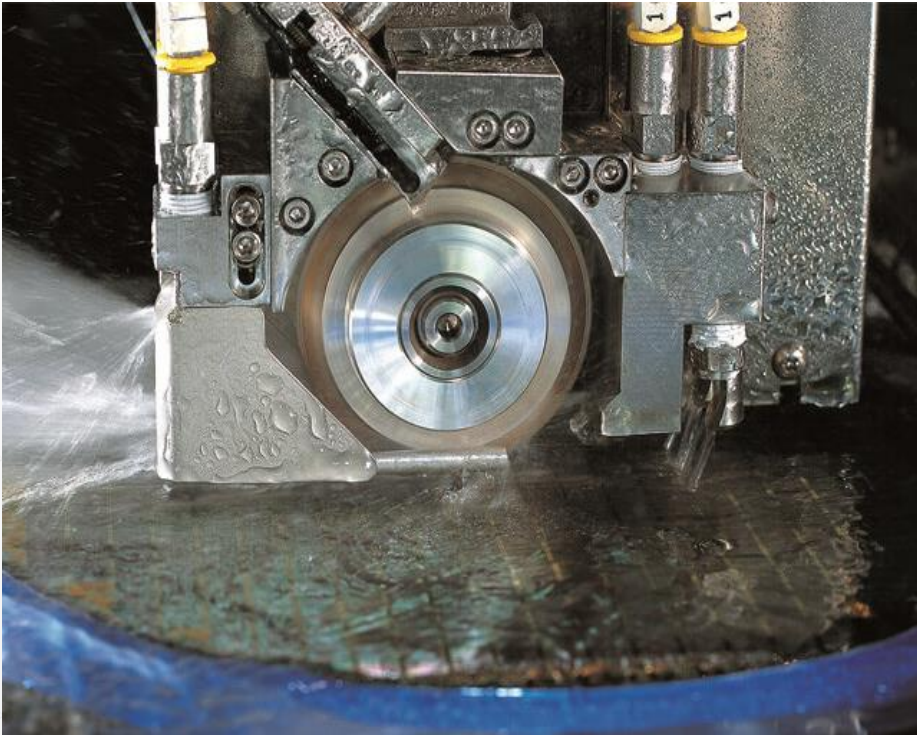


Dicing

- Dicing is a process that occurs near the end of processing, where we are using a mechanical blade to separate the individual die
- Dicing is usually performed in “streets” – an intentionally blank area between die which is sacrificed during dicing
- Dicing generates a lot of heat that can damage either the blade or the wafer, so water is run over the substrate to help with cooling
- Dicing is a very dirty process – silicon is crushed and removed in the streets, resulting in lots of substrate and deposited material “dust” being generated. Water also helps with keeping the surface clean
- We will generally coat the wafer with photoresist before dicing to act as a protective layer, so the dicing “dust” does not scratch the surface



Dicing



- Dicing is done with a diamond blade – the hardness of diamond is needed for precise dicing
 - The blade is a polymer slurry with diamond dust distributed within
 - The blade is gradually consumed when dicing, exposing the next layer of diamond for future dicing
- Dicing is performed on sticky dicing tape to prevent the die from shooting off the surface once it is released
- Dicing is an automated process, where we tell the machine the die height and width and use a microscope to find the streets. After that, the machine will complete the dicing on its own