

Bonding material must enter the etched enamel of a tooth in order for brackets to be bonded to its surface. Noel et al investigated the effect of an argon laser on acid resistance. Laser etching is not yet a common practice in orthodontic bonding, despite the fact that it offers numerous benefits over traditional techniques. When used for quick bonding on surgically exposed teeth without acid etching, laser etching is beneficial in addition to bond strength. Following laser irradiation, the calcium–phosphate ratio of the enamel can be changed, resulting in the creation of more stable and acid–proof compounds. The tooth surface etched by the Er,Cr:YAG laser has a shear bond strength that is appropriate and on par with those made using acid. Some studies, however, disagree with the aforementioned conclusions. The disparate results are most likely the result of various research' experimental designs and power outputs. The Nd:YAG laser was thought to be an inefficient pretreatment for enamel bonding brackets. The Nd:YAG laser is more suited for soft tissue operations, as the earlier research showed. The Nd:YAG laser is ineffective when applied to dental hard tissue, and it has thermal side effects that might hurt the patient and damage the pulp of the teeth. Both soft and hard tissue treatments can be performed using Er:YAG and Er,Cr:YAG lasers without experiencing any thermal adverse effects. With the advent of Er:YAG and Er,Cr:YAG lasers, laser etching has improved in efficiency. The enamel surface was first etched using a Nd:YAG laser.