CMOS image sensors are today the technology of choice for imagers in consumer products. Mobile phones have provided the market drive to continuously improve the technology, which finds today more and more usage in other applications such as scientific and bio-medical. The talk will first briefly review the status of the technology for consumer and other high-volume applications, before moving to reviewing CMOS image sensors for some high-end applications, namely scientific, bio-medical and space. Among the topics reviewed is the use of CMOS image sensors for the detection outside the visible range and including X-rays and particles, options for fully depleted sensors and the development of large area sensors (manufactured by stitching techniques), up to the size of a full 200 or 300 mm wafers.