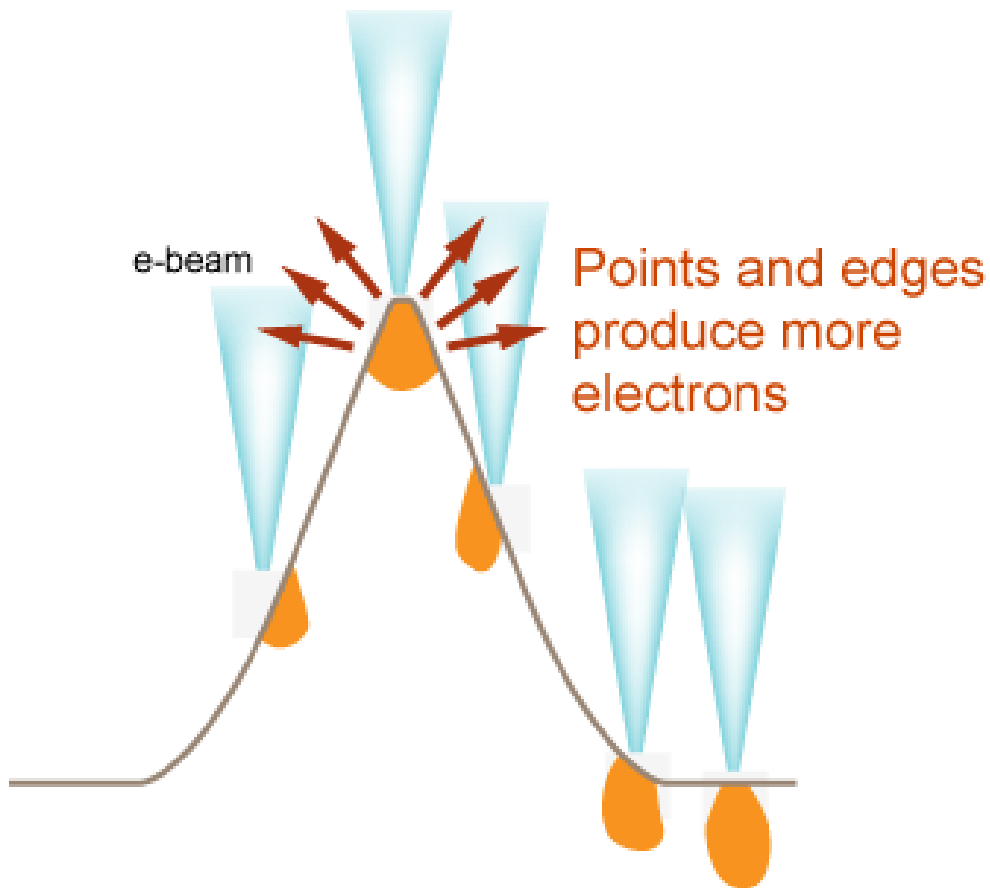


# Interpreting an SEM Image

## Edge effects

Edge effects are due to the enhanced emission of electrons from edges and peaks within the specimen. Electrons preferentially flow to and are emitted from edges and peaks.



Changes in the interaction volume with topography

## Charging

Charging is produced by build-up of electrons in the sample and their uncontrolled discharge, and can produce unwanted artifacts, particularly in secondary electron images. When the number of incident electrons is greater than the number of electrons escaping from the specimen then a negative charge builds up at the point where the beam hits the sample.

## Specimen damage

Irradiating a specimen with an electron beam results in a loss of the beam energy to the sample in the form of heat.

## Beam-related contamination

Beam-related contamination refers to the deposition of material (e.g. carbon) in a region on the sample where the beam has been scanning.