

# Principles of nc-AFM

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I will introduce the basic principles upon which is based the nc-AFM technique by examining the following basic questions:

- How it works?
- What is measured?
- How to make meaningful measurements?

I will insist of the key concepts that are essential for a good understanding of the technique.

These considerations will be illustrated by a few examples taken from the literature and some perspectives for future developments will be discussed.

## Outline

1. Forces relevant to AFM
2. Static AFM and jump-to-contact
3. Dynamic AFM
4. AM versus FM-AFM
5. The instrument step-by-step
6. Force spectroscopy
7. The role of the oscillation amplitude
8. Examples
9. Perspectives