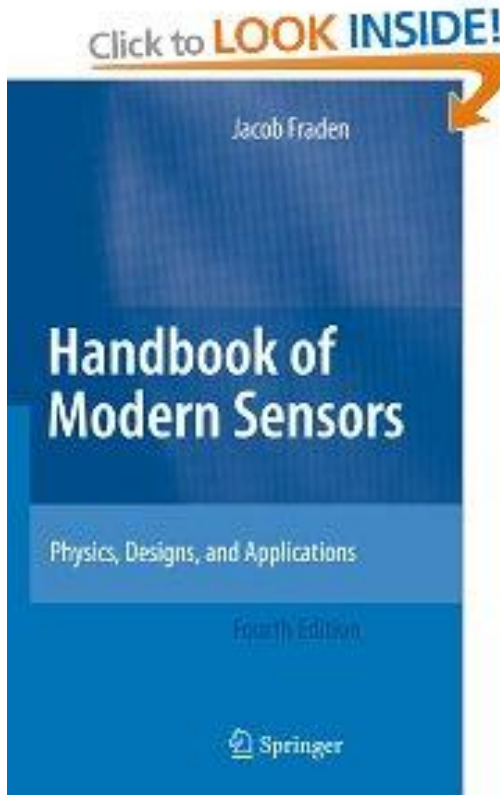
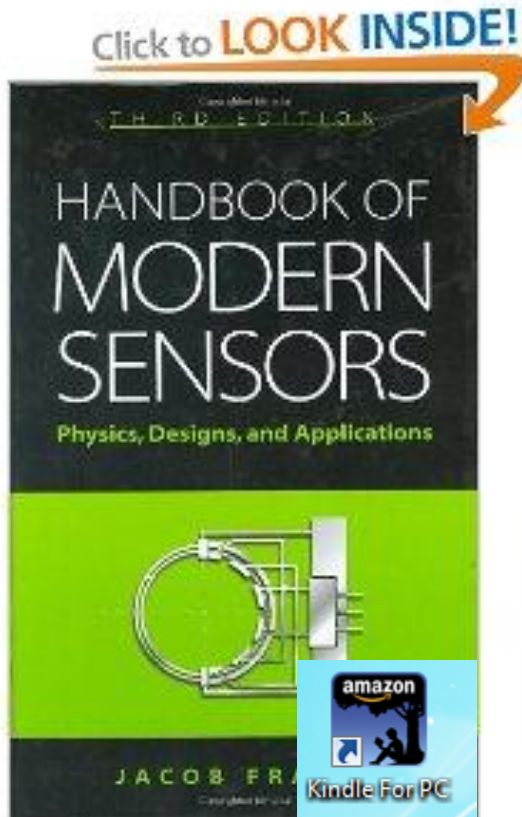


Introduksjonstime

- Språk ?
- Presentasjon av forelesere
- Presentasjon av studentene
- Orientering om lab opplegget
- Diverse
 - Lærebok
 - Kompendie
 - Web sider
- Litt om målesystem og sensorer

Lærebok



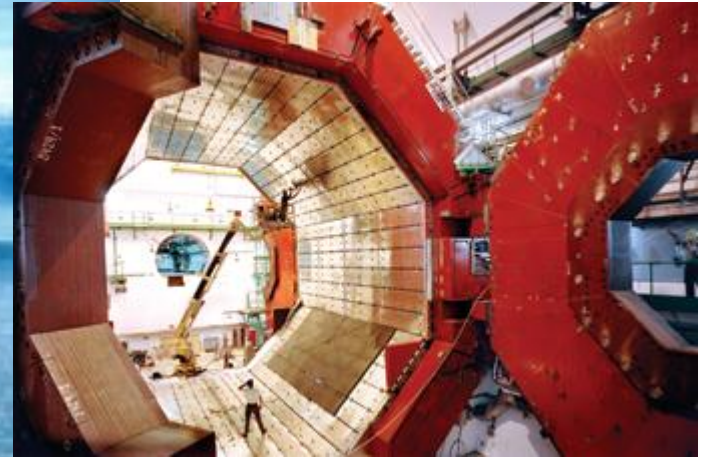
FYS3230 Sensorer og måleteknikk

Kortfattet kompendium over noen emner

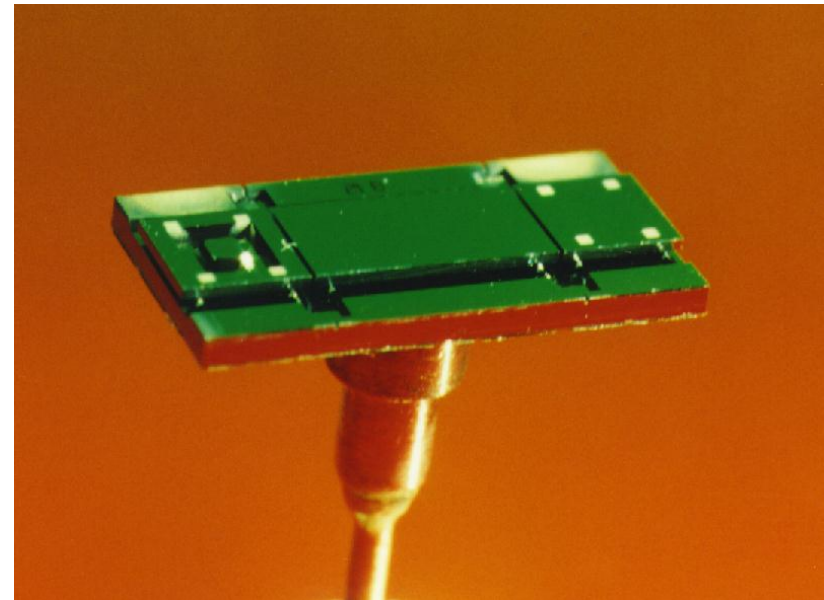
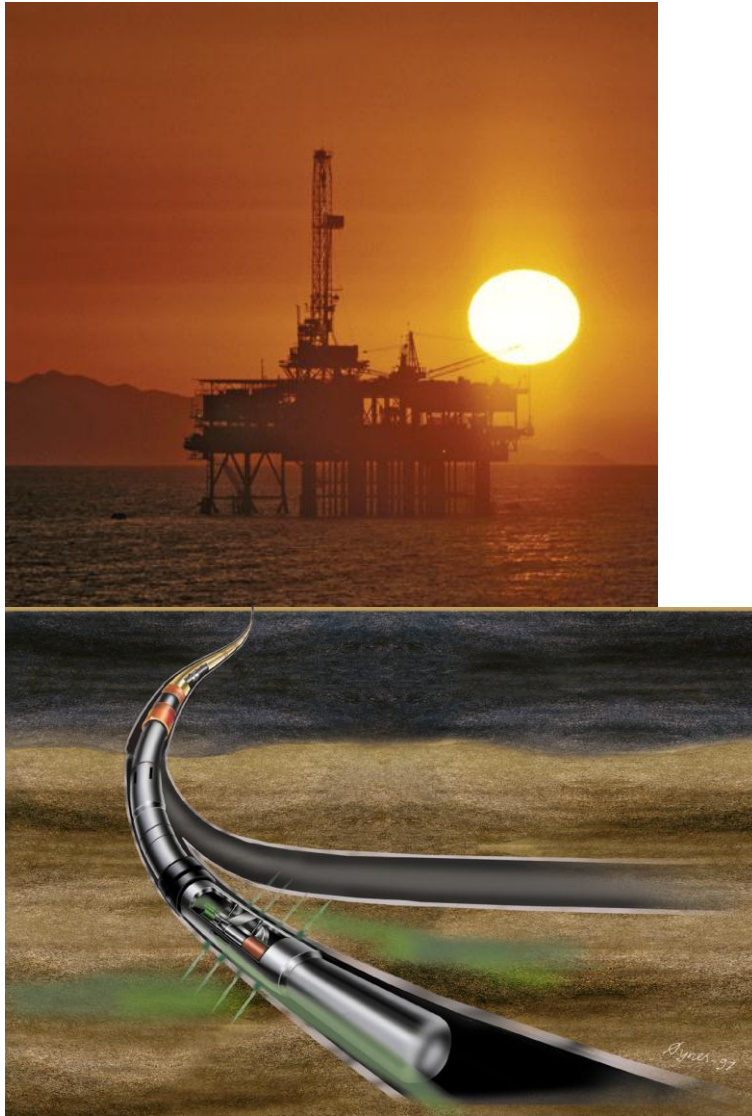
Ola Sven
2007

1

Akademisk målesystem og sensor



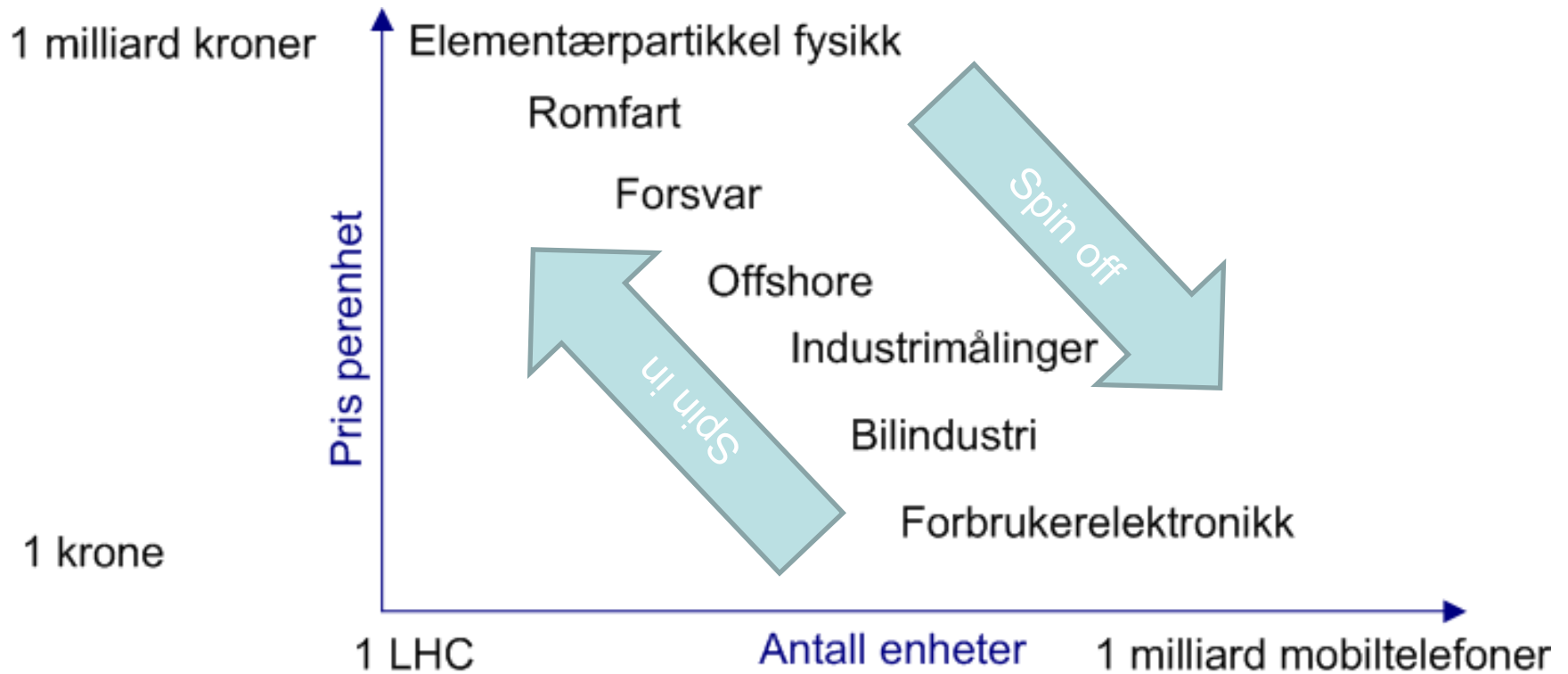
Industrielt målesystem og sensor



Sensorer i forbrukerelektronikk



Sensor markeder



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MicroGel

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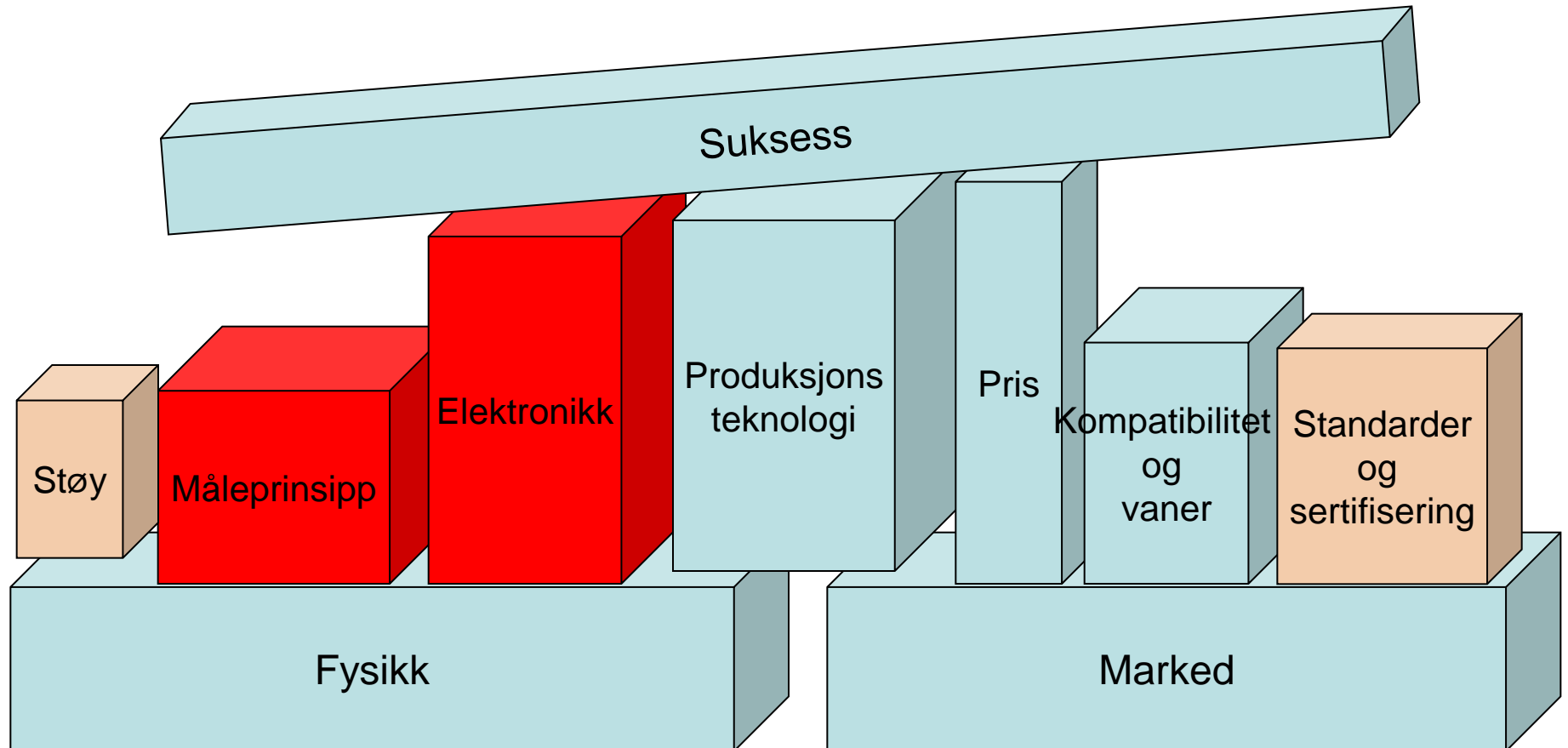
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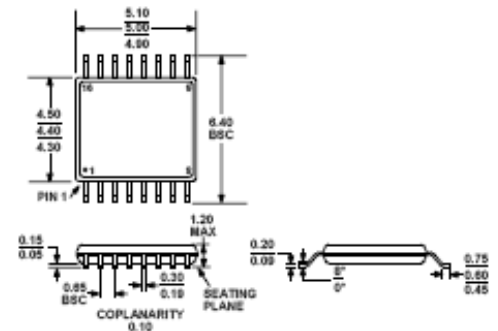
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	23 March 2010 Video gaming has become one of the globe's most popular pastimes. Fans say games are often educational, their detractors answer they are anything but. Might ESA have something to learn from gaming? A new Agency study says the answer is yes.
	Related links
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	▪ Systems and software engineering
	▪ Technology Observatory
	▪ MindArk PE AB
	ESA on Youtube
	

Suksessfaktorer for sensorer



Instrumenteringsløsninger



COMPLIANT TO JEDEC STANDARDS MO-153-AB
Figure 44. 16-Lead Thin Shrink Small Outline Package (TSSOP)
(RU-16)
Dimensions shown in millimeters

FYS 3230

For hvem

- Dem som skal tolke målinger
- Dem som skal måle
- Dem som skal instrumentere
- Dem som skal lage sensorer

Hva

- Statistikk
- Systemteori
- Elektronikk
- Fysikk
 - El mag
 - Fast stoff fysikk
 - Dynamikk
 - (Mekanikk)
 - (Statistisk mekanikk)
 - (Optikk)

Målesystem – Sensor - Transducer

Fig. 1.1 Purpose of measurement system

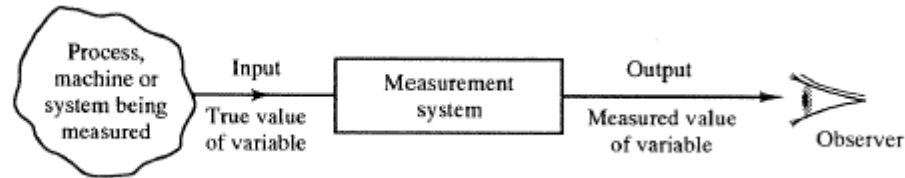


Fig. 1.2 General structure of measurement system

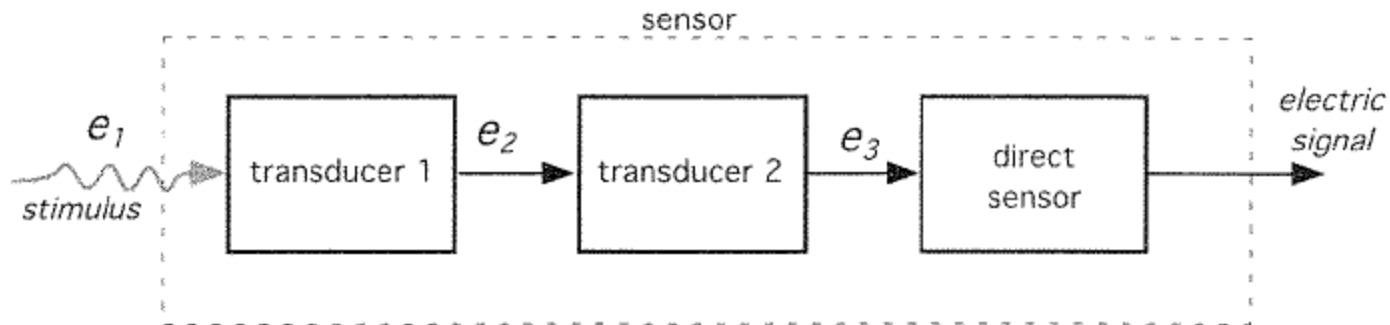
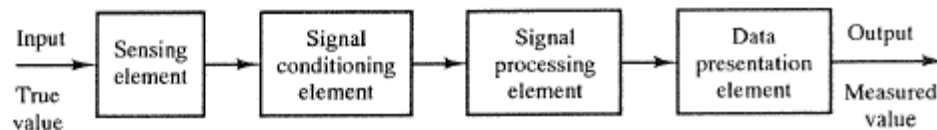


Fig. 1.2. A sensor may incorporate several transducers. e_1 , e_2 , and so on are various types of energy. Note that the last part is a direct sensor.

Direkte og indirekte sensorer

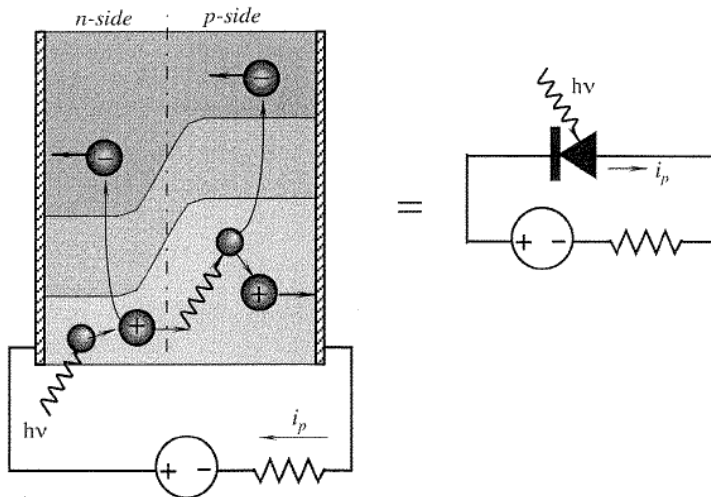


Fig. 14.3. Structure of a photodiode.

En direkte sensor gir en elektrisk respons i ett trinn

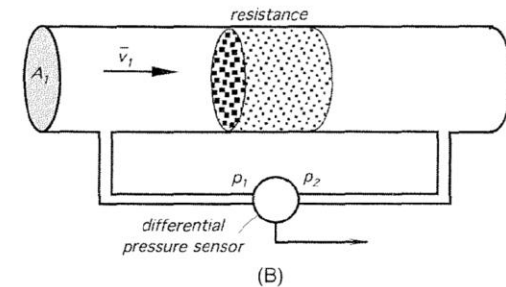
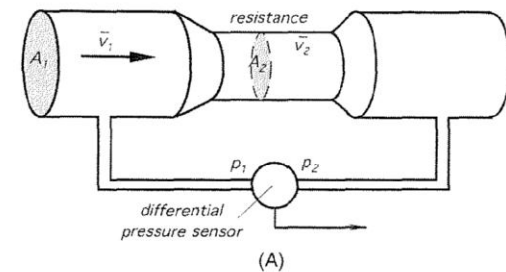


Fig. 11.3. Two types of flow resistor: a narrow channel (A) and a porous plug (B).

En indirekte sensor overfører først energi fra en form til en annen. Ofte via en transducer.

Aktive og passive sensorer

278 7 Position, Displacement, and Level

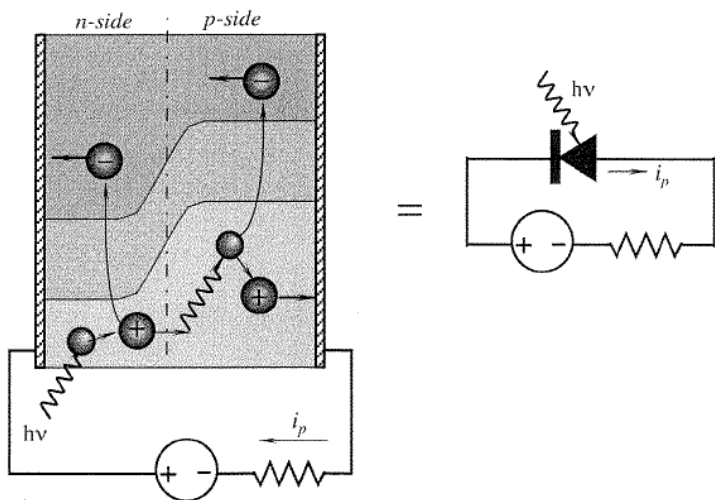
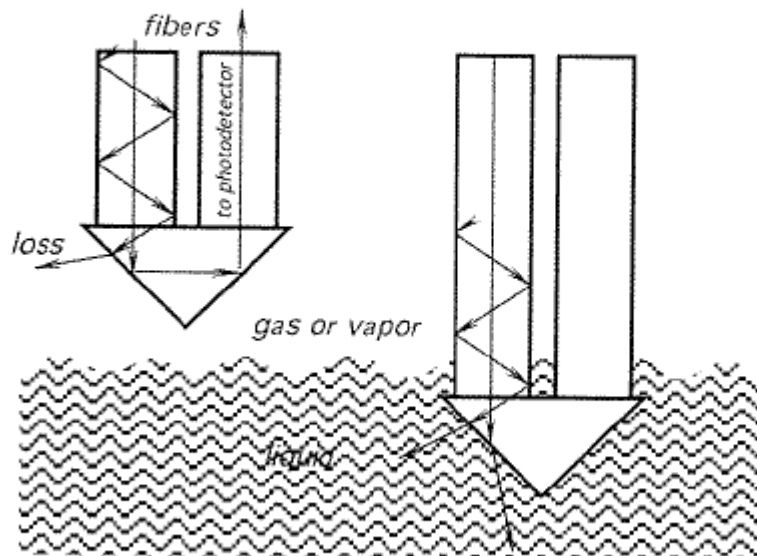


Fig. 14.3. Structure of a photodiode.

En passiv sensor henter energien fra det den måler



En aktiv sensor tilfører energien den trenger for å gjøre målingen