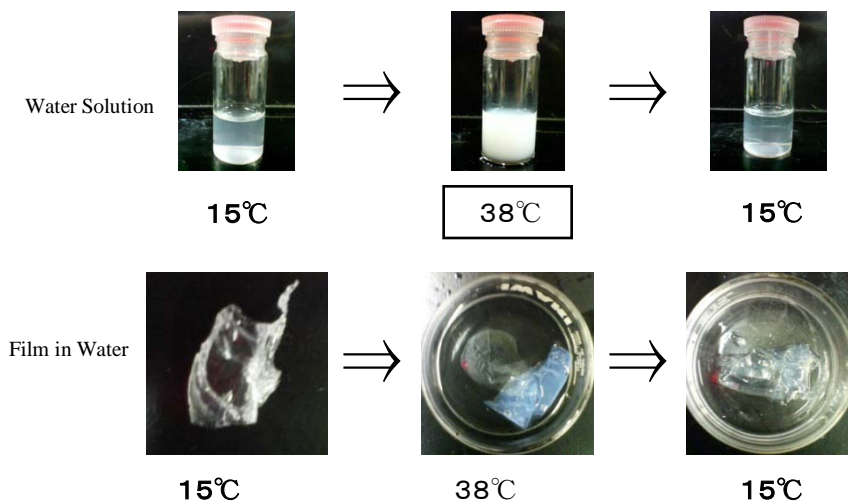


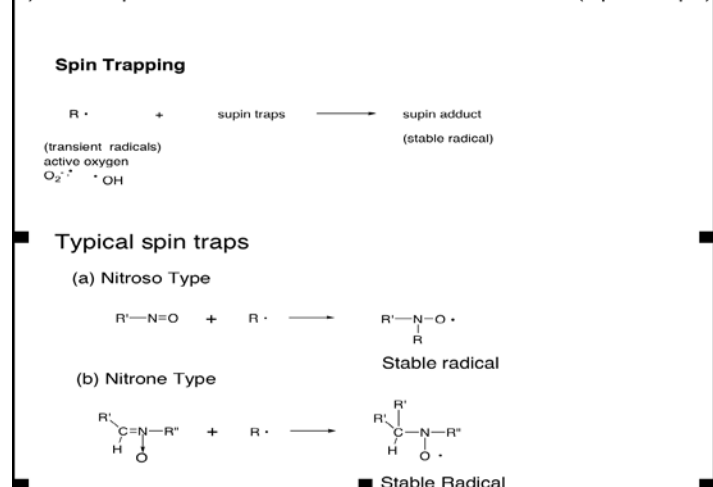
# Development of New Functional Materials

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## 1) Development of New Thermally Responsive Materials



## 2) Development of new radical detection materials (Spin Traps)



## Content :

1) Poly(N-isopropylacrylamide)(PNIPAM) is thermal responsive materials and poly(vinyl alcohol)(PVA) is water-soluble synthetic polymer because of their many hydroxyl groups. In our group, new materials having both characters of PNIPAM and PVA were prepared and systematic research to establish fundamentals of the new thermal responsive materials and its application have been carried out. (see above).

2) Recent years chemical behaviors of active oxygen species are attracted much attentions in many biological researches because the active species cause many diseases. Unfortunately, the active oxygen species cannot be measured directly because of their high reactivity. Therefore spin trapping has intensively been studied to elucidate the reaction mechanisms of the active oxygen species. To develop this technique the development of useful spin trapping agent for the biological systems is very important. We have been attempted to develop new useful spin traps (see below).

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