

Principle of ESR dating and its applications to geosciences

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Principle of electron spin resonance (ESR) and ESR dating are given in this introductory talk with its history and future applications to planetary material survey. ESR dating was applied to Quaternary geology, anthropology and archaeology. Applications of ESR dating to icy materials in outer planets will be made in 21st century. ESR and remote thermoluminescence (TL) and optical stimulated luminescence (OSL) will be proposed as noble applications.