

## **Steady-state Radiolysis of Water with Therapeutic Heavy Ions from HIMAC**

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Carbon ions of several hundreds MeV per nucleon are now utilized in actual cancer therapy as steady-state beams at HIMAC and HIBMC in Japan. Not only as a basic research but also as a key knowledge to understand detailed mechanism of radiation damage to human bodies in the therapy, it is essential to comprehend water radiolysis with highly energetic heavy ions. Heavy ions are categorized as “high-LET radiations” and generate very dense tracks in matter after their passages. In this talk, what have been clarified up to now will be shown from the viewpoint of track structure, and our recent trial using spin trapping technique with ESR will be shown. In addition, our other activities will briefly be introduced.