

Report of the RCNP Collaboration Research Network (RCNP-COREnet)		
COREnet041		PI: NIIKURA Megumi
1	Title of research	3D imaging of element analysis by muon-induced X-ray emission at PSI
2	List of Participants (Name and affiliation)	M. Niikura, Researcher, RIKEN, niikura@riken.jp
		S. Asari, Master student, Osaka Univ., asari@irc.osaka-u.ac.jp
		I-Huan. Chiu, Post-doc, Osaka Univ. chiu.ihuan@jaea.go.jp
		R. Mizuno, PhD. student, Univ. Tokyo, mizuno@nex.phys.s.u-tokyo.ac.jp
		K. Ninomiya, Associate professor, Osaka Univ., ninomiya@irc.osaka-u.ac.jp
		T. Saito, Post-doc, Univ. Tokyo, saito@cns.s.u-tokyo.ac.jp
		A. Sato, Assistant professor, Osaka Univ. sato@phys.sci.osaka-u.ac.jp
		K. Terada, Professor, Osaka Univ., terada@ess.sci.osaka-u.ac.jp
		D. Tomono, Assistant Professor, Osaka Univ., tomono@rcnp.osaka-u.ac.jp
3	Period of research	from April 2022 to March 2024
4	Main location of collaboration implementation	Paul Scherrer Institute (PSI), Switzerland
5	Publication list (Please include DOI if available)	Original paper R. Mizuno et al., Nucl. Instrum. Methods, A1060, 169028 (2024). https://doi.org/10.1016/j.nima.2023.169029
		Talks M. Niikura, "Development of muonic X-ray spectrometer for element analysis", LMU seminar at Paul Scherrer Institut (PS), Online, April 2022.
		水野るり恵、「1MeV 陽子ビームを用いた広ダイナミックレンジ光子検出器の性能評価実験」、タンデム加速器及びその周辺技術の研究会、オンライン、2022 年 7 月
		水野るり恵、「Ge 検出器を用いた光子検出器システムの広ダイナミックレンジにおける性能評価実験」、放射線化学討論会、オンライン、2022 年 9 月
		R. Mizuno, "Evaluation of muonic X-ray spectrometer with Compton suppressors in a wide energy range.", Workshop for muon elemental analysis research 2023, online, 2023 年 4 月
6	Description of the results and outputs	see in https://docs.google.com/document/d/1lkj0tgFWxpy1Mxme3YKgtiSKqWLj4vrsj3zPW03hKY/edit
7	Amount of budget implemented (for internal use only)	610,000 Yen