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AI/ML-supported evaluation of PGAA data

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Prompt Gamma Activation Analysis (PGAA) is a highly sensitive non-destructive method of chemical analysis with neutrons. PGAA is widely used in various scientific fields, such as archaeometry, materials science, and biomonitoring of air pollution. Prompt gamma-ray spectra contain up to thousands of gamma lines, which results in a laborious and time-consuming post-processing by hand. The EvalSpek-ML project will provide a new AI/ML-based approach for the evaluation of convex-combinable spectra. We will present ideas and preliminary results of the PGAA-related work packages. The EvalSpek-ML consortium is a collaboration between Helmholtz-Zentrum Hereon, Technical University of Munich, Helmut Schmidt University Hamburg and AiNT GmbH. Funding is provided by BMBF in the framework of the German action plan "ErUM-Data".

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