

# Crystal base of the negative half of the quantum superalgebra for $\mathfrak{gl}_{m|n}$

Jae-Hoon Kwon\*, Il-Seung Jang and Akito Uruno

Seoul National University  
Incheon National University  
Seoul National University  
E-mail: [jaehoonkw@snu.ac.kr](mailto:jaehoonkw@snu.ac.kr)

The theory of crystal base was introduced by Kashiwara, and it has been one of the most powerful methods in the study of representations of quantum groups. In this talk, we introduce a crystal base of  $U_q(\mathfrak{gl}_{m|n})^-$  the negative half of the quantum group associated with a general linear Lie superalgebra  $\mathfrak{gl}_{m|n}$ , and give a combinatorial description of the associated crystal.

## References

- [1] [arXiv:2210.15288](https://arxiv.org/abs/2210.15288)