Table A1: List of abstracts used to test the NLP software for the initial tests

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| Paper |  |
| [1] | Pavithra, C.L.P., Janardhana, R.K.S.K., Reddy, K.M. *et al.* An advancement in the synthesis of unique soft magnetic CoCuFeNiZn high entropy alloy thin films. *Sci Rep* 11, 8836 (2021). https://doi.org/10.1038/s41598-021-87786-8 |
| [2] | Ma Y, Wang Q, Zhou X, Hao J, Gault B, Zhang Q, Dong C, Nieh TG. A Novel Soft-Magnetic B2-Based Multiprincipal-Element Alloy with a Uniform Distribution of Coherent Body-Centered-Cubic Nanoprecipitates. *Adv Mater*. (2021), 33(14), e2006723. doi: 10.1002/adma.202006723. |
| [3] | Cramer CL, Nandwana P, Yan J, Evans SF, Elliott AM, Chinnasamy C, Paranthaman MP. Binder jet additive manufacturing method to fabricate near net shape crack-free highly dense Fe-6.5 wt.% Si soft magnets. *Heliyon*, (2019), 5(11):e02804. doi: 10.1016/j.heliyon.2019.e02804.. |
| [4] | Xu Y, Zhu Z, Zhao H, Zhou J. Preparation of ε-Fe(Si)₃N Powder Using a Salt Bath Nitriding Reaction and a Study on the Soft Magnetic Properties of the Powder. *Materials*, (2019);12(2):228. doi: 10.3390/ma12020228. |
| [5] | Zhu M, Fa Y, Yao L, Tao P, Jian Z, Chang F. The Influence of Annealing on the Structural and Soft Magnetic Properties of (Fe0.4Co0.6)79Nb₃B18 Nanocrystalline Alloys. *Materials*, (2018), 11(11):2171. doi: 10.3390/ma11112171. |
| [6] | Zhai S, Wang W, Xu J, Xu S, Zhang Z, Wang Y. Effect of Co and Gd Additions on Microstructures and Properties of FeSiBAlNi High Entropy Alloys. *Entropy,* (2018), 20(7):487. doi: 10.3390/e20070487. |
| [7] | Wang J, Li J, Wang J, Bu F, Kou H, Li C, Zhang P, Beaugnon E. Effect of Solidification on Microstructure and Properties of FeCoNi(AlSi)0.2 High-Entropy Alloy Under Strong Static Magnetic Field. *Entropy*, (2018), 20(4):275. doi: 10.3390/e20040275. |
| [8] | Yu M, Bian X, Wang T, Wang J, Metal-based magnetic fluids with core–shell structure FeB@SiO2 amorphous particles, *Soft Matter*, (2017),13, 6340-6348; https://doi.org/10.1039/C7SM01238A |