

A STRONGLY NONEQUILIBRIUM STATE  
IN MAGNETIC NANODOTS AT HIGH  
PUMPING LEVELS

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S u m m a r y

A theoretical model describing a strongly excited magnon system in a magnetic nanodot has been developed. In this system, despite the discreteness of its spectrum, the parametric processes similar to those occurring in massive specimens take place, in particular, the processes of Suhl instability. Owing to a slight mismatch between the frequencies of modes that are engaged in the indicated processes, the threshold of the latter becomes somewhat higher and a non-resonant parametric interaction takes place. It is shown that, at certain power levels in the system, the processes similar to those of the so-called kinetic instability observed in massive specimens can emerge to excite the lowest-frequency mode of a nanoelement.