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Magnetization plateaux of frustrated antiferromagnets¹

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Quantum magnetism represents one of the fastest growing research fields of modern condensed matter physics. Numerous experimental and theoretical investigations in this field are driven by a relentless search for exotic spin-liquid ground states realizing seemingly paradoxical “magnet without magnetism.” Along the way several ordered but nonetheless quite unusual states of magnetic matter have been discovered recently. In my talk I focus on the simplest of them – collinear spin configuration which supports constant magnetization in a finite interval of the applied magnetic field, thus realizing a magnetization plateau state.

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