

Witten, E.

Phases of $N = 2$ theories in two dimensions. (English) [Zbl 0910.14020](#)
Nucl. Phys., B 403, No. 1-2, 159-222 (1993).

Summary: By looking at phase transitions which occur as parameters are varied in supersymmetric gauge theories, a natural relation is found between sigma models based on Calabi-Yau hypersurfaces in weighted projective spaces and Landau-Ginzburg models. The construction permits one to recover the known correspondence between these types of models and to greatly extend it to include new classes of manifolds and also to include models with $(0, 2)$ world-sheet supersymmetry. The construction also predicts the possibility of certain physical processes involving a change in the topology of space-time.

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MSC:

[14J32](#) Calabi-Yau manifolds (algebraic-geometric aspects)

[81T30](#) String and superstring theories; other extended objects (e.g., branes) in quantum field theory

Cited in **7** Reviews
Cited in **496** Documents

Keywords:

Calabi-Yau hypersurfaces; supersymmetry; mirror symmetry

Full Text: [DOI](#) [arXiv](#)

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