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Hongjie Dong* (hongjie_dong@brown.edu), 182 George St, Providence, RI 02912, and **Yanyan Li** and **Zhuolun Zhang**. *Optimal gradient estimates for the insulated conductivity problem.*

We consider the insulated conductivity problem with closely spaced inclusions in a bounded domain in \mathbb{R}^n . The gradient of solutions may blow up as the distance between inclusions approaches to 0. We obtain an optimal gradient estimate of solutions in terms of the distance.

This is based on joint work with Yanyan Li and Zhuolun Yang. (Received August 18, 2021)