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Bond Percolation on the hexacarpet and related fractals

We discuss bond percolation on the a non-post critically finite analogue to the usual Sierpinski carpet and show that critical probability to percolate across the fractal is strictly less than one. Then using a modified dual graph argument we show that it is strictly greater than zero giving a non-trivial phase transition. The dual graph that arises is the hexacarpet which has recently been taken up as an interesting example. Our methods give a non-trivial phase transition on the hexacarpet as simple corollary to the main argument.