

# Products of CW complexes

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CW complexes are used extensively in algebraic topology as a suitable class of spaces to work with, but the product of two CW complexes need not be a CW complex, as shown by Dowker. Whitehead and Milnor gave sufficient conditions on the two spaces for the product to be a CW complex, and in 1978 Liu gave a characterisation under the assumption of CH of those pairs of CW complexes for which the product is a CW complex. In a 1982 paper Tanaka weakened the assumption for this characterisation to  $\mathfrak{b} = \aleph_1$ , but it seems the topic has remained unaddressed since then. In this talk I will present a complete characterisation, valid under ZFC alone, of those pairs of CW complexes whose product is a CW complex.