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**Characterization of Orlicz–Sobolev space.** (English) Zbl 1166.46308  
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Summary: We give a new characterization of the Orlicz–Sobolev space  $W^{1,\Psi}(\mathbb{R}^n)$  in terms of a pointwise inequality connected to the Young function  $\Psi$ . We also study different Poincaré inequalities in the metric measure space.

**MSC:**

- 46E35** Sobolev spaces and other spaces of “smooth” functions, embedding theorems, trace theorems
- 46E30** Spaces of measurable functions ( $L^p$ -spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, ideal spaces, etc.)
- 26D10** Inequalities involving derivatives and differential and integral operators

Cited in **8** Documents

**Keywords:**

Orlicz-Sobolev space; Poincaré inequalities; metric measure space

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

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