The following are the main results presented in this talk.

Theorem 1. If $X$ is a countably tight compactum such that every limit cardinal strictly below $|X|$ is strong limit then $|X| = |D|$ for some discrete subspace $D$ of $X$.

Theorem 2. If each point of a compactum $X$ has character at least $\kappa$ then $X$ cannot be covered by fewer than $2^\kappa$-many discrete subspaces.

Theorem 3. The $\omega$th power of any compactum has a $\sigma$-discrete dense subset.

Theorem 4. If the character of a compactum is greater than $\kappa$ then there is a discrete subspace $Y$ of $X$ with $|Y| \leq \kappa^+$ and a point $p$ whose character in $Y \cup \{p\}$ is greater than $\kappa$.

Theorems 1-3 are joint results with Z. Szentmiklóssy. Several open problems will also be formulated.