Interactive Patent Search with IPC Query Expansion

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A patent retrieval system

• User’s input: keywords (default: and search)
• Search in IPC classes
  • System matches keywords to the IPC classes (subgroup level)
  • Original query is expanded with a set of keywords extracted from the selected classes
• Search in Patent Documents
  • The selected classes are used for IPC filtering (class level)
  • System returns a list of relevant documents (with title)
Search IPC Classes

![Search Results](image)

- **IPC class**
- **Score**
- **URL**

- B60C5-02 (0.01375377) info
- A47H99-00 (0.013445971) info
- B05D3-14 (0.010177168) info
- B60C2-14 (0.008169058) info
- B29L23-24 (0.0066372924) info
- B29D23-24 (0.005323557) info
- C09J183-06 (0.0052370327) info
- F42B3-11 (0.0049448106) info

Expand
### Search Documents

**Found 100 results.**

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<thead>
<tr>
<th>Docno</th>
<th>Score</th>
<th>Title</th>
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<tr>
<td>EP-0889108</td>
<td>10.719231</td>
<td>Sealant application method</td>
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<td>EP-1391290</td>
<td>10.584115</td>
<td>Sealant charging process in sealant-incorporated tire tube</td>
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Future Work

• Support for Boolean and proximity search
• Link to real document, keywords highlighted
• Popup for abstract
• IPC collocation
• Add date range