

good green HOMES

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planet

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PHOTOGRAPHY BY LINDA SVENDSEN

NATURALLY COOL

home profile

Modern architecture is sometimes associated with an attitude that puts style before comfort, elevating the architect's vision above the needs of the people who live in the building. Not so in this house in Venice, California, designed for his family by David Hertz, an architect who brings together modernist and environmentalist sensibilities.

Underneath this home's sexy modern skin, it's all about efficiency. The design makes good use of the 40 x 90-foot urban lot, accommodating a 2,700-square-foot house, a garage, and a surprisingly generous amount of usable outdoor space. Inside, there are no "museum" rooms—those formal living and dining rooms and grand foyers that see little use but gobble up square footage. The house is energy and resource efficient, too. It makes

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Located about a half mile from the Pacific Ocean, this house is naturally cooled, heated, and lit much of the time. It's a durable, low-maintenance house, built with rugged materials that will hold up over time and withstand energetic handling by three active children.



Right: A tall slot window in the children's bathroom provides privacy while letting in light. The bathroom surfaces are Syndecrete, a concrete solid-surfacing material developed by Hertz. Syndecrete is a mix of cement and recycled materials, including fly ash (a waste product from coal-burning electric utilities), glass, reground plastic, and scrap metal. Hertz also used Syndecrete for the kitchen counters, fireplace, and much of the furniture in the house.

Above: A jumble of our society's junk brightens a particularly colorful Syndecrete tile.

Below: With a concrete floor, there's no need to use additional resources like wood, tile, or carpet for a finish flooring.



the most of the sun's free energy for heating, cooling, and lighting, while incorporating recycled materials within a durable low-maintenance structure.

The home is split into two sections linked by a second-story bridge. In the front portion, the kitchen, dining, living, and family areas are arranged in a flowing U-shape. Above the main living areas are the master bedroom, master bath, and study. A sun-drenched interior bridge crosses from the master bedroom over an outdoor courtyard to the rear structure, where the children's two bedrooms flank a bathroom. Beneath the children's

A sun-splashed bridge crosses from the master bedroom to the children's wing. Beneath is an open-air courtyard for playing and barbecuing. One wall of the bridge is clad with Syndecrete tiles. It faces south, serving as a passive solar collector that stores the sun's heat and radiates it back into the home when temperatures cool. When the interior temperature rises to a certain point, a high window and two skylights automatically open to draw hot air from the house.



Right: There's little wasted space—even the flat roof is put to work. The master bedroom opens onto an outdoor living room. Further back on the roof there's a hot tub, a solar water heater, a sunny lounging area, and an orchid greenhouse. The building's exterior is almost 50 percent glass, yet Hertz says it's still very energy efficient, in part because he used high-performance windows and skylights that block heat gain and loss.



rooms is a garage accessible from a rear alley.

Many of the rooms borrow light, views, and space from each other, giving the home an airy feel. An open staircase and a loft-like study keep the upstairs and downstairs connected, while strategically placed windows provide views and fresh air from one end of the house to the other.

The home was designed to be comfortable without air conditioning. Upstairs, hopper windows channel cooling Pacific Ocean breezes from the master bedroom across the bridge to the children's rooms. A transom window above the bedroom door allows cross ventilation even when the door is closed. Warm air from downstairs rises up the open staircase and is flushed out through a high window and two skylights that automatically open when the temperature reaches a certain point. The high-performance skylights have a special mirrored film between two panes of glass, blocking heat gain while allowing in plenty of daylight.

Concrete floors provide excellent thermal mass, absorbing the sun's heat during the day and slowly radiating that heat back into the living spaces in the





When the afternoon sun hits the front of the house (bottom left), light slices through the glass gaps in the poured-in-place concrete wall and bench (left and bottom right). Hydronic radiant-heating pipes run through the concrete floor, the bench, and even the showers. A rooftop solar collector heats water, providing about 80 percent of the family's space heating and hot water needs, with a gas-fired water heater making up the difference.



evening when temperatures drop. Shading is also used to good advantage. A second-story deck shades the windows below, while bamboo and other plants close to the house provide additional cooling. Despite being in a residential neighborhood that's densely built up, the home feels surprisingly connected to the natural environment—thanks to the flow of ocean breezes, the warmth of sunlit rooms, and the lively interplay of indoor and outdoor spaces.